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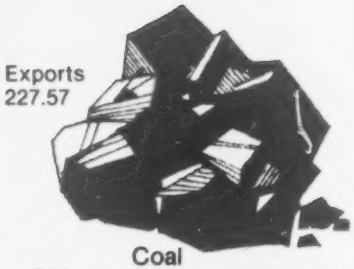
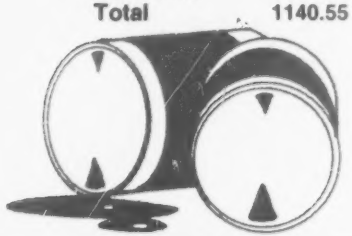


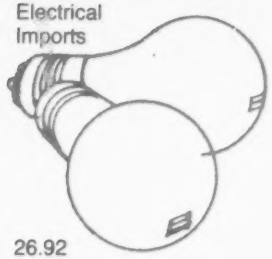
Exports
227.57

Coal
Ohio 673.33
Non-Ohio 870.09
Total 1543.42

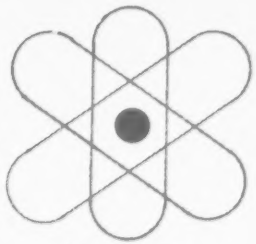
Natural Gas
Ohio 143.30
Non-Ohio 764.96
Total 908.26

Petroleum
Ohio 70.86
Non-Ohio 1069.69
Total 1140.55

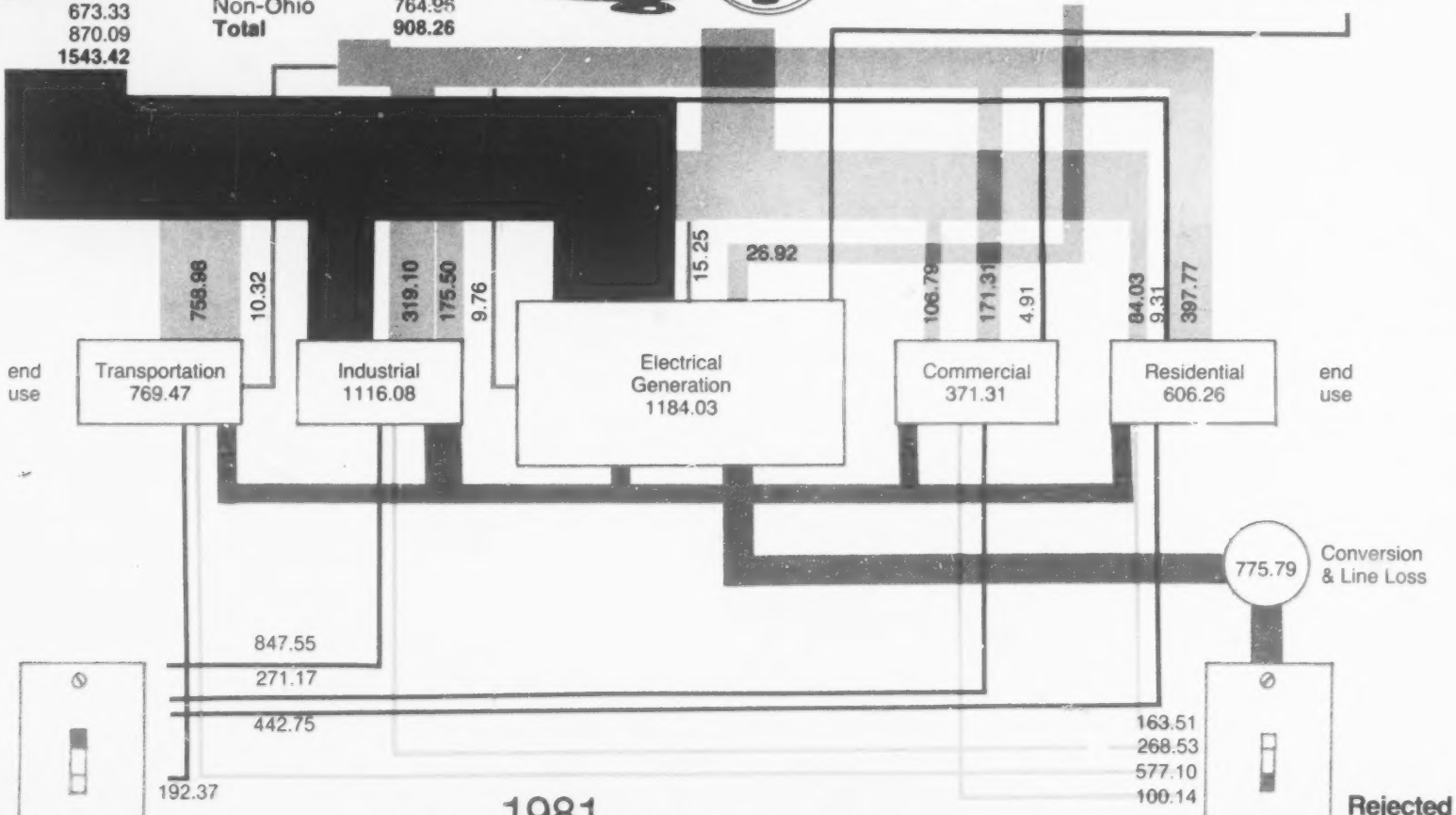




Net Electrical Imports
26.92



Nuclear 19.76



Useful Energy 1753.84

Rejected Energy 1885.07

All figures represent trillion Btu's

1981 Energy Status Report

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ENERGY FLOW DIAGRAM - STATE OF OHIO

On the cover of this Annual Energy Status Report we present a visual of where Ohio's energy comes from, what it goes into, and where it is ultimately used.

More than half of Ohio's energy input ends up as "Rejected Energy." This is wasted energy. We are wasting it in converting coal into electricity and then transporting it to the end-user. We are wasting petroleum with extremely inefficient automobiles and either needless or thoughtless use of them.

We are wasting energy in our homes with oversized and poorly maintained heating and cooling equipment. We are not making enough use of cogeneration or waste heat recovery in the industrial sector.

The rejected energy portion of our graphic balance sheet costs just as much as the useful energy. It could be argued that rejected energy costs more, because it performs no useful nor economic work. Significant shifting of total energy use to favor useful energy rather than rejected energy will save millions of dollars a year for the Ohio consumer.

The Ohio Department of Energy accepts the challenge of eliminating energy waste as our prime goal. We further accept the challenge to increase Ohio's portion of the energy input sectors, particularly in coal and natural gas.

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INTRODUCTION

In accordance with Section 1551.04(E) of the Ohio Revised Code, the Ohio Department of Energy hereby submits its Annual Energy Status Report.

We are pleased to report that there is no foreseeable shortage of conventional fuels in Ohio during the coming decade. The background for this conclusion will be discussed in the statistical summary sections of this Report. In addition, for many of the Tables and Figures which we present there will be explanatory comments and conclusions offered.

A new facet of the Annual Status Report is contained in this year's document. This is a discussion of various projections on a national, as well as a state-wide, basis for energy demand through the year 1990. The reader will note that there is a range of variance in the projections. It is not possible to view nearly ten years into the future with a certainty concerning another oil embargo, economic recovery or a deepening recession, turmoil in other parts of the world which may affect the United States and our economy, the effects of the decontrol and deregulation of the nation's oil and natural gas reserves, nor the effects of technological innovation during these years.

There is one irrefutable conclusion we make for the coming decade, and that is that fuel prices will continue to escalate. Perhaps not at the rate experienced during the 1970's, but increased fuel prices will occur.

This will result in a demand-side constraint, either through active (insulation) or passive (thermostat setback) measures. We have seen that the conservation ethic in Ohio has had a significant effect on consumption.

We estimate that Ohioans reduced their consumption by 313 trillion Btu's between 1979 and 1980. (Table 1.) A recent audit by U.S. DOE credits ODOE programs with a net savings of at least 66 trillion Btu's, with additional "probable" savings of 54 trillion Btu's.

A conservative estimate of Ohio energy prices of $3.00 per million Btu's thus indicates that the Department efforts saved Ohio consumers between $200 and $330 million during 1980. These savings are attributed to the State Energy Conservation Plan (SECP). The remaining energy savings accrued from a combination of the recession which had an effect on industrial and individual energy consumption, plus cost-avoidance by the consumer in their active and passive conservation efforts.

The 1980 conservation programs from ODOE, funded principally by the federal government, will be expanded by newly mandated federal programs in 1981. On August 1, 1981, the Residential Conservation Service (RCS) began in Ohio, one of the earliest state implementation programs in the nation. The federal government mandated that regulated utilities offer conservation advice, residential energy audits, retrofit cost and cost-benefit data, contractor and supplier contacts and financing information and assistance.

ODOE coordinated the design and development of the State plan which has been enthusiastically endorsed and implemented by the state's regulated utilities and has been termed a model program by U.S. DOE officials.

Another ODOE operating project is the Energy Extension Service (EES) which provides matching federal funds for a variety of locally designed energy conservation information and assistance programs. The Department received 66 proposals, and is now conducting proposal evaluations and funding recommendations for these EES proposals. In 1981, over $1 million will be channeled into local and regional governments under this program.

The informational and retrofit opportunities afforded to Ohio consumers under the new RCS and EES programs are in addition to the continuing efforts of our State Energy Conservation Plan. It is reasonable to anticipate much greater future savings of energy and money for Ohioans with the addition of these programs.

For the past three years ODOE has administered the Title III program of the National Energy Conservation Policy Act, which provides funds for audits, engineering and some retrofit funding for schools, hospitals and certain buildings operated by units of local government. As of August, 1981, ODOE has administered $12.4 million in federal grants and has recommended an additional $7.8 million for funding during the current federal fiscal year. This program has operated at no cost to the Ohio General Revenue Fund.

ODOE has maintained a toll-free Energy Hot Line for the past three years, during which time over 1/2 million pieces of literature, audits and information referrals have been handled. During 1980, more than 10,000 telephone contacts were accommodated through this information service.

In addition, 1980 was the year "Ohio Car Care Month" was initiated. This event has drawn the attention of the media, the automotive after-care market and all interested segments of the industry. This highly successful program will be repeated in 1981, and ODOE has indications of support that this innovative promotion will become a national event in 1982, and plans are now underway for that expansion.

Public transportation utilization in Ohio increased 12.2 percent from 1979 to 1980. Over 240 million riders utilized public transportation in Ohio last year. ODOE was instrumental in the initiation, production and implementation of a statewide education and awareness program for public transportation in 1980, and these efforts will continue in 1981.

The industrial and commercial sector has been served through a variety of demonstration projects and institutional programs conducted under contract. Recovery of waste heat has been accomplished as a result of major boiler retrofitting, with fuel savings in the order of 5-10% and paybacks of less than three years. Combustion efficiency has been improved where industry was shown how to measure and control excess combustion air and to reduce fuel use in production furnaces through specific containment techniques.

Information on proven conservation methods continues to be presented to general audiences and to specialized groups through workshops and seminars. One series is reaching energy managers in six medium-sized cities. Another has addressed particular industries such as stone, clay and glass, bakeries, warehouses, and others throughout the State.

Energy audit manuals have been made available to industry groups including structural clay products, iron and steel foundries, blast furnaces, and inorganic chemicals. Another series of eight manuals for conducting Class A audits is in preparation for major Ohio industries. A project is underway to provide technical assistance to ten selected industrial groups in utilizing their industrial wastes as a source of energy.

Solar energy opportunities in Ohio are administered by the Ohio Solar Office, now in its third year of operation. The office promotes the exchange of information, technology, and solar applications to assist in further reduction of dependence on conventional fuels.

Since the development of the Solar Office Data Bank, requests for information have steadily increased. In addition to responding to a large volume of mail requests the office also renders assistance through telephone and office consultations. These requests for information range from the relatively simple to those requiring in-depth analysis.

But even though interest in solar applications have been on the increase, many Ohioans are either misinformed or uninformed about the possibilities for utilizing renewable energy. To publicize solar opportunities, the solar office has implemented a state-wide comprehensive solar energy educational and promotional campaign to be effected via radio/TV spots, county fairs, the Ohio State Fair, and numerous presentations at public meetings. This campaign should reach approximately 5 million Ohioans.

In addition to these functions, the Ohio Solar Office gives all support and assistance possible to programs which promote the research and development of advanced systems and the transfer of technology to Ohio industry, in order that we may realize the full potential of renewable energy resources for meeting our energy demands.

The finite nature of petroleum and natural gas which provided the nation with over 70 percent of its energy needs in 1980 gives rise to the need for alternative energy and greater utilization of resources currently being expended. Within the economic limits and constraints, ODOE has monitored, pursued and promoted many short and long term projects which will extend the life of our fossil fuel base.

These projects include, but are not limited to, coal combusion, alcohol fuels from grain, waste heat recovery, cogeneration, enhanced oil recovery, oil and natural gas from our abundant shale formations, coal gasification and liquefaction, oil mining, coal/oil mixtures, chemical and electronic cleaning of coal, and identification, transport and utilization of in-state resources.

Our philosophy is that we can no longer afford waste. We cannot waste what we have, what we use, nor what is available to us. Each component of the energy scenario must be addressed: better recovery techniques; better utilization technologies; more efficient machineries; and a commitment to do a whole lot more with a whole lot less.

The posture of the current administration in Washington is one which bears tracking. There have been speculations about the future role of U.S. DOE, however it no longer appears that this agency will be phased out as previously suspected. However there will be cutbacks and shutoffs of funding for many programs which heretofore have been channeled through the states.

Many of these programs have been restored and we anticipate that others will follow, but the implication is quite clear that the states will be called upon to take a greater responsibility in energy administration and policy. This is well within keeping of the federal administration's attitude of allowing the individual states to establish priorities and goals according to their own individual needs rather than dictate unilateral guidelines which may or may not be applicable.

STATISTICAL SUMMARIES

The following Tables and Figures describe the Ohio energy profile, historic, current and projected. Last year's consumption figures have been estimated in many instances due to lack of data from external sources.

The models used to establish these estimates have been thoroughly tested and improved upon by the ODOE Division of Information and Forecasting which has been responsible for assembling the data we present in the report.

Wherever possible, external sources have been cited. Unfortunately, these data do not always enable us to present the desired breakouts and comparisons.

The Department gratefully acknowledges the efforts of our regular employees who are responsible for the creative data recovery, analysis and formulation for this Report. The Report, with the sole exception of projection and estimate modelling, was compiled by Department personnel who went an extra step to assist in its compilation. Their contributions are in addition to their regularly assigned duties. We are proud of their efforts and their extra measure of work.

Table 1. Ohio Gross Energy Consumption by Fuel, 1971-1980

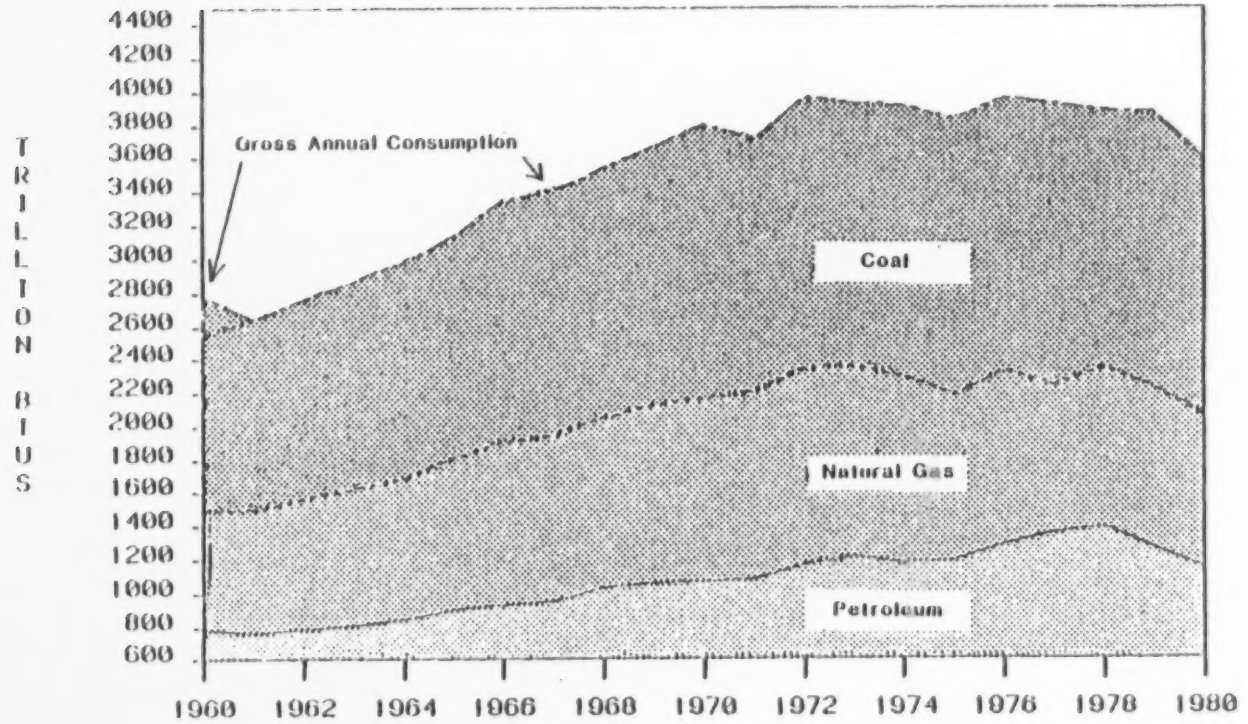
	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Coal										
Million Short Tons	63.30	67.91	65.66	69.72	68.08	71.02	74.19	67.96	72.80	67.30
Trillion Btu	1,511.70	1,620.31	1,581.89	1,620.76	1,659.01	1,632.45	1,691.52	1,543.45	1,653.37	1,543.42
% of Total	40.7%	40.8%	40.2%	41.4%	43.2%	41.2%	43.0%	39.5%	42.3%	42.7%
Petroleum										
Million Barrels	203.07	218.39	227.98	220.23	223.70	242.32	255.62	260.34	229.97	208.10(e)
Trillion Btu	1,081.03	1,162.55	1,213.65	1,172.39	1,190.84	1,289.94	1,360.74	1,385.87	1,260.03	1,140.55
% of Total	29.1%	29.3%	30.8%	29.9%	31.0%	32.6%	34.6%	34.4%	32.2%	31.6%
Natural Gas										
Billion Cu.Ft.	1,087.13	1,147.80	1,104.16	1,086.65	956.88	1,005.93	847.50	929.59	936.11	880.10
Trillion Btu	1,121.91	1,184.53	1,139.49	1,121.42	987.49	1,038.12	874.62	959.34	966.07	908.26
% of Total	30.2%	29.9%	29.0%	28.6%	25.7%	26.2%	22.2%	24.5%	24.7%	25.1%
Nuclear and Hydro										
Billion kWh	.01	.01	.01	.01	.01	.01	.47	2.43	3.16	2.12
Trillion Btu	.10	.10	.09	.10	.10	.10	4.57	22.65	29.45	19.76
% of Total	0	0	0	0	0	0	0.1%	0.6%	0.8%	.5%
Total Gross Energy										
Trillion Btu	3,714.74	3,967.49	3,935.12	3,914.67	3,837.45	3,960.61	3,931.45	3,911.31	3,908.92(e)	3,611.99(e)

Note: Estimates (e) prepared by the Ohio Department of Energy.

Source: The Ohio Department of Energy and the Federal Energy Data System (FEDS).

Figure 1.

OHIO GROSS ENERGY CONSUMPTION BY FUEL
1960-1980



Source: Ohio Department of Energy.

The Table and Figures for gross energy consumption by fuel show that in 1980 we used less energy in the State than since pre-1970 years. Some of this must be credited to the recession of 1979-1980, but during the past decade we have experienced two other recessions which did not affect energy use to this degree.

The highly industrial nature of Ohio's economy, particularly in the automobile and related industries is a major contributor, to be sure. However, the depth of the energy valley in all fuels indicates that a more fuel efficient, cost avoidance energy ethic is being observed across the board in the State.

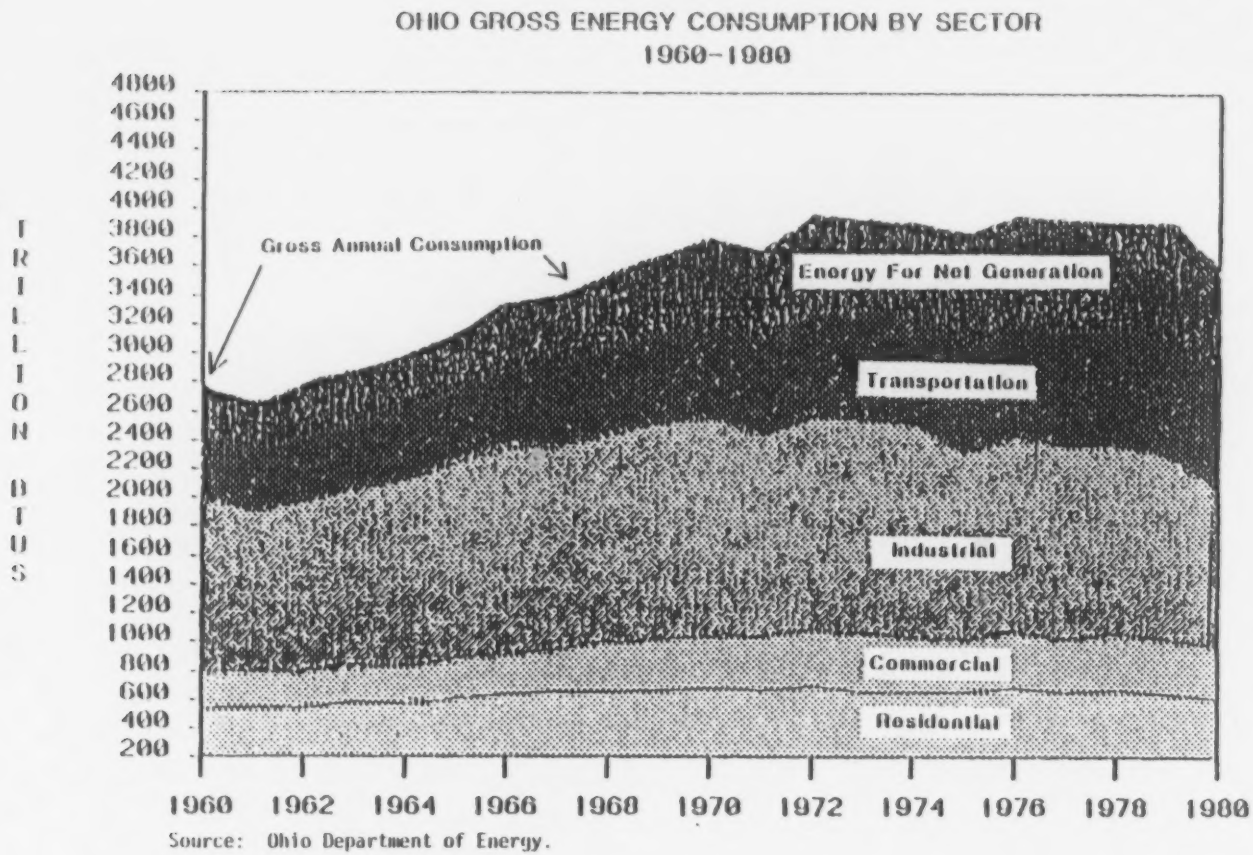
Table 2. Ohio Gross Energy Consumption by Sector, 1971-1980
(Trillions of Btu's)

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Residential	676.0	697.1	662.4	657.0	649.9	688.0	652.7	664.6	643.92	606.26(e)
% of Total	18.2	17.6	16.8	16.8	16.9	17.4	16.6	17.0	16.5	16.8
Commercial	365.8	396.4	400.4	385.0	374.2	389.9	374.9	400.3	379.48	371.31(e)
% of Total	9.8	10.0	10.2	9.8	9.8	9.8	9.5	10.2	9.7	10.3
Industrial	1402.9	1470.4	1478.3	1483.7	1293.4	1358.6	1337.7	1311.5	1276.26	1116.08(e)
% of Total	37.8	37.1	37.6	37.9	33.7	34.3	34.0	33.5	32.6	30.9
Transportation	684.9	743.3	778.0	734.3	748.5	787.1	805.4	826.3	817.72	769.47(e)
% of Total	18.4	18.7	19.8	18.8	19.5	19.9	20.5	21.1	20.9	21.3
Energy for Net Generation.Utilities	585.1	660.3	616.0	654.7	771.5	737.0	760.7	708.6	791.54	748.87(e)
% of Total	15.8	16.6	15.7	16.7	20.1	18.6	19.3	18.1	20.2	20.7
Total Consumption	3714.7	3967.5	3935.1	3914.7	3837.5	3960.6	3931.4	3911.3	3908.92(e)	3611.99(e)

Note: Energy for net generation is equal to the difference between total consumption of energy by the electric utilities sector and the Btu equivalent of the electricity generated. All estimates (e) prepared by the Ohio Department of Energy.

Source: The Ohio Department of Energy, and the Federal Energy Data System (FEDS).

Figure 2.



Source: Ohio Department of Energy.

The Transporation, Industrial and Energy for Net Generation sectors led the way in producing the significant drop in Ohio Gross Energy Consumption. While current economic conditions contributed to the reduced consumption in these three major sectors, conservation also played a major role. More fuel efficient automobiles, carpooling and greater use of public transporation contributed greatly to the reduction in the transportation sector.

Industries have made much more efficient use of process energy, waste heat recovery and other cost-saving techniques. Conservation in all sectors caused the reduction in net electrical demand, thus there is a drop in that sector. The following pages provided the sector-by-sector, fuel use characteristics in Ohio over the past decade which clearly indicate a more energy-efficient personality emerging in Ohio.

Table 3. Ohio Energy Consumption by Fuel, Residential Sector

	1974		1975		1976		1977		1978		1979		1980	
	Physical Units	Trillion Btu	Physical Units	Trillion Btu	Physical Units	Trillion Btu	Physical Units	Trillion Btu	Physical Units	Trillion Btu	Physical Units	Trillion Btu	Physical Units	Trillion Btu
Distillate/Kerosene (MM Bbls)	11.47	77.37	13.79	79.83	17.70	102.42	17.67	102.25	17.36	100.49	15.38(e)	89.24(e)	11.89(e)	69.03(e)
% of Total		11.8%		12.3%		14.9%		15.7%		15.1%		13.9%		11.4%
LPG (MM Bbls)	4.98	19.98	5.16	20.71	5.31	21.29	5.00	20.05	4.87	19.54	4.99(e)	20.01(e)	3.74(e)	15.00(e)
% of Total		3.0%		3.2%		3.1%		3.1%		2.9%		3.1%		2.5%
Petroleum Total	88.35	97.35	88.95	100.54	23.01	123.71	22.67	122.30	22.21	120.03	20.37(e)	109.25(e)	15.63(e)	84.03(e)
% of Total		14.8%		15.5%		18.0%		18.7%		18.1%		17.0%		13.9%
Coal (Million Tons)	0.76	18.76	0.50	12.21	0.46	11.21	0.40	9.74	0.26	6.19	.20	4.76	.36	9.31
% of Total		2.9%		1.9%		1.6%		1.5%		0.9%		0.7%		1.5%
Natural Gas (Billion c.f.)	435.80	449.75	427.82	441.51	440.19	454.28	401.93	414.79	416.22	430.06	406.03	419.02	385.44	397.77
% of Total		68.5%		67.9%		66.0%		63.5%		64.7%		65.1%		65.6%
Electric (Billion kWh)	26.72	91.17	28.07	95.60	28.95	98.78	31.03	105.87	31.75	108.33	32.50	110.89	33.75(e)	115.15(e)
% of Total		13.9%		14.7%		14.4%		16.2%		16.3%		17.2%		19.0%
Total	------	657.03	------	649.86	------	687.98	------	652.7	------	664.61	-----	643.92(e)	------	606.26(e)

Note: Estimates (e) prepared by the Ohio Department of Energy.

Source: The Ohio Department of Energy and the Federal Energy Data System (FEDS).

Table 4. Ohio Energy Consumption by Fuel, Commercial Sector

	1974		1975		1976		1977		1978		1979		1980	
	Physical Units	Trillion Btu	Physical Units	Trillion Btu	Physical Units	Trillion Btu	Physical Units	Trillion Btu	Physical Units	Trillion Btu	Physical Units	Trillion Btu	Physical Units	Trillion Btu
Asphalt (MM Bbls)	9.26	61.46	9.03	59.90	8.13	53.94	10.15	67.32	10.85	71.99	10.55(e)	70.00(e)	10.55(e)	70.00(e)
% of Total		16.0%		16.0%		13.8%		18.0%		18.0%		18.4%		18.9%
Distillate (MM Bbls)	4.71	27.44	4.98	29.01	6.23	36.29	6.20	36.12	6.29	36.64	6.17(e)	35.94(e)	4.87(e)	28.37(e)
% of Total		7.1%		7.8%		9.3%		9.6%		9.2%		9.5%		7.6%
Gasoline (MM Bbls)	.81	4.34	1.33	5.95	1.07	5.61	.91	4.77	.93	4.88	.98(e)	5.15(e)	.90(e)	4.73(e)
% of Total		1.1%		1.6%		1.4%		1.3%		1.2%		1.4%		1.3%
LPG (MM Bbls)	.55	2.22	.57	2.30	.59	2.37	.56	2.23	.54	2.17	.56(e)	2.25(e)	.42(e)	1.68(e)
% of Total		0.6%		0.6%		0.6%		0.6%		0.5%		0.6%		0.5%
Residual (MM Bbls)	1.23	7.73	3.06	19.24	3.45	21.69	3.61	22.70	1.36	21.47	.48(e)	3.02(e)	.32(e)	2.01(e)
% of Total		2.0%		5.1%		5.6%		6.1%		5.3%		0.8%		0.6%
Petroleum Total	16.58	103.19	18.77	116.40	19.47	119.90	21.43	133.14	21.97	136.8	18.74(e)	116.36(e)	17.06(e)	106.79(e)
% of Total		26.8%		31.1%		30.7%		35.5%		34.2%		30.7%		28.8%
Coal (Million Tons)	.41	10.18	.27	6.63	.25	6.08	.22	5.30	.14	3.38	.10	2.38	.19	4.91
% of Total		2.6%		1.8%		1.6%		1.4%		0.8%		0.6%		1.3%
Natural Gas (Billion c.f.)	192.50	198.66	169.16	174.78	179.39	185.13	149.01	153.78	172.43	177.95	170.0	175.44	166.00(e)	171.31(e)
% of Total		51.6%		46.7%		47.4%		41.0%		44.5%		46.2%		46.1%
Electric (Billion kWh)	21.39	72.98	22.30	76.36	23.10	78.82	24.24	82.71	24.09	82.16	25.0	85.30	25.98(e)	88.30(e)
% of Total		19.0%		20.4%		20.2%		22.1%		20.5%		22.5%		23.8%
Total	------	385.01	-----	374.17	-----	389.93	-----	374.93	-----	400.29	-----	379.48(e)	-----	371.31(e)

Note: Estimates prepared by the Ohio Department of Energy.

Source: The Ohio Department of Energy and the Federal Data System (FEDS).

Table 5. Ohio Energy Consumption by Fuel, Industrial Sector

	1974		1975		1976		1977		1978		1979		1980	
	Physical Units	Trillion Btu	Physical Units	Trillion Btu	Physical Units	Trillion Btu	Physical Units	Trillion Btu	Physical Units	Trillion Btu	Physical Units	Trillion Btu	Physical Units	Trillion Btu
Diesel fuel (MM Bbls)	1.68	9.79	2.04	11.88	2.80	16.31	2.29	13.34	2.54	14.80	2.01(e)	11.71(e)	1.73(e)	10.08(e)
% of Total		0.7%		0.9%		1.2%		1.0%		1.1%		0.9%		0.9%
Distillate/Kerosene (MM Bbls)	6.24	36.35	5.89	34.31	7.48	43.57	9.39	54.70	8.51	49.57	6.63(e)	38.39(e)	4.14(e)	24.04(e)
% of Total		2.4%		2.7%		3.2%		4.1%		3.8%		3.0%		2.2%
Gasoline (MM Bbls)	1.55	8.11	1.35	7.08	1.22	6.40	1.12	5.86	1.03	5.42	.91(e)	4.78(e)	.85(e)	4.46(e)
% of Total		0.5%		0.5%		0.5%		0.4%		0.4%		0.4%		0.4%
LPG (MM Bbls)	1.80	7.22	1.63	6.55	1.87	7.50	2.28	9.16	3.25	13.05	1.67(e)	6.70(e)	1.10(e)	4.41(e)
% of Total		0.5%		0.5%		0.6%		0.7%		1.0%		0.5%		0.4%
Residual (MM Bbls)	4.12	27.16	5.67	35.65	6.41	40.30	8.52	53.57	7.50	47.15	4.42(e)	27.79(e)	3.58(e)	22.51(e)
% of Total		1.8%		2.8%		3.0%		4.0%		3.6%		2.2%		2.0%
Other Petro. Products (MM Bbls)	21.97	124.78	20.39	115.60	20.80	129.59	23.83	135.38	24.64	139.79	21.15(e)	120.00(e)	19.39(e)	110.00(e)
% of Total		8.4%		9.0%		9.5%		10.1%		10.7%		9.4%		9.9%
Petroleum Total	37.56	213.41	36.97	211.07	40.58	243.67	47.43	272.03	47.47	269.76	36.79(e)	209.37(e)	30.79(e)	175.50(e)
% of Total		14.4%		16.3%		17.9%		20.3%		20.6%		16.4%		15.7%
Coal (Million Tons)	24.36	632.57	20.88	542.25	20.16	522.43	21.21	548.36	18.73	484.39	19.10	493.96	16.12	416.86
% of Total		42.6%		41.9%		38.5%		41.0%		36.9%		38.7%		37.4%
Natural Gas (Billion c.f.)	427.65	441.33	344.54	355.56	373.43	305.38	285.13	294.25	328.38	339.89	339.80	350.67	309.21(e)	319.10
% of Total		29.7%		27.5%		28.4%		22.0%		25.8%		27.5%		28.6%
Electric (Billion kWh)	57.56	196.40	54.07	184.49	60.71	207.14	65.38	223.08	64.02	218.44	65.14	222.26	59.97(e)	204.62(e)
% of Total		13.2%		14.3%		15.2%		16.7%		16.7%		17.4%		18.3%
Total	-----	1,483.71	-----	1,293.37	-----	1,358.62	-----	1,337.72	-----	1,311.48	-----	1,276.26(e)	-----	1,116.08(e)

Note: Other petroleum products include petroleum coke, and petrochemical feedstocks.
Estimates (e) prepared by the Ohio Department of Energy.

Source: The Ohio Department of Energy, and the Federal Energy Data System (FEDS).

Table 6. Ohio Energy Consumption by Fuel, Transportation Sector

	1974		1975		1976		1977		1978		1979		1980	
	Physical Units	Trillion Btu	Physical Units	Trillion Btu	Physical Units	Trillion Btu	Physical Units	Trillion Btu	Physical Units	Trillion Btu	Physical Units	Trillion Btu	Physical Units	Trillion Btu
Distillate/Diesel (MM Bbls)	14.91	86.85	15.26	88.89	17.96	104.62	17.04	99.26	19.45	113.3	20.86(e)	121.51(e)	19.1(e)	111.26(e)
% of Total		11.8%		11.9%		13.3%		12.3%		13.7%		14.9%		14.5%
Gasoline (MM Bbls)	114.99	603.45	116.96	613.77	121.37	636.96	125.73	659.81	127.79	667.98	123.75	649.69	115.59	606.85
% of Total		82.2%		82.0%		80.9%		81.9%		80.8%		79.5%		78.9%
Jet Fuel (MM Bbls)	5.65	31.10	5.95	32.30	5.66	31.28	6.06	33.48	5.62	31.24	4.72(e)	26.21(e)	6.48(e)	36.02(e)
% of Total		4.2%		4.3%		4.0%		4.2%		3.8%		3.2%		4.7%
LPG (MM Bbls)	.09	.35	.07	.28	.08	.32	.09	.34	.08	.31	.34(e)	1.36(e)	.27(e)	1.08(e)
% of Total		0		0		0		0		0		0.2%		0.1%
Residual (MM Bbls)	.33	2.07	.61	3.84	.93	5.85	.64	4.02	.65	4.09	.60(e)	3.77(e)	.60(e)	3.77(e)
% of Total		0.3%		0.5%		0.7%		0.5%		0.5%		0.5%		0.5%
Petroleum Total	135.97	723.82	138.85	739.08	146.0	779.03	149.56	796.91	153.09	816.92	150.27(e)	802.54(e)	142.04(e)	758.98(e)
% of Total		98.6%		98.7%		99.0%		99.0%		98.9%		98.1%		98.6%
Natural Gas (Billion c.f.)	10.02	10.34	9.03	9.31	7.72	7.97	8.06	8.31	8.97	9.21	14.54	15.01	10.00(e)	10.32(e)
% of Total		1.4%		1.2%		1.0%		1.0%		1.1%		1.8%		1.3%
Electric (Billion kWh)	.04	.14	.04	.14	.04	.14	.04	.14	.05	.17	.05	.17	.05(e)	.17(e)
% of Total		0		0		0		0		0		0		0
Total	-----	734.3	-----	748.53	-----	787.14	-----	805.36	-----	826.3	-----	817.72(e)	-----	769.47(e)

Note: Estimates (e) prepared by the Ohio Department of Energy.

Source: The Ohio Department of Energy and the Federal Energy Data System (FEDS).

OHIO-U.S. - COMPARISONS

The following Tables and Figures show how Ohio differs from the total U.S. in energy consumption patterns.

First, because Ohio is the fifth largest industrial state in the nation in terms of Gross State Product, and because our industrial base is extremely energy-intensive from steel to auto to glass, plastics, non-electrical machinery and rubber, our per-capita energy consumption is about 3 percent higher than the national average. (Table 7)

Ohio is much more coal-intensive--more than double the national average--principally because over 97 percent of Ohio electricity demand is coal generated. And while the State is a major consumer of natural gas and petroleum products, the New England and Eastern Seaboard states, which generate electricity from oil, and the Southwestern states which use natural gas to generate, tend to throw the total fuel-use comparisons somewhat out of perspective.

An analysis of gross energy consumption by sector reveals only small differences which could be attributed to weather patterns and commuting distances.

Home heating and electrical generation dependencies on oil in the geographic areas east of Ohio have produced the marked differences in the product consumption for petroleum.

Even though Ohio is more coal-dependent than the rest of the nation, the State is still highly vulnerable to major interruptions of supply of petroleum products or natural gas. All consuming sectors would feel a major disruption should such a condition develop.

Table 7. Per Capita Energy Consumption 1971-1980
(Millions of Btu's)

	Ohio	U.S.
1971	345.9	NA
1972	370.0	NA
1973	366.3	354.6
1974	364.3	343.4
1975	357.5	331.0
1976	370.5	346.2
1977	358.4	351.9
1978	363.9	357.7
1979	364.3 (estimated)	358.0
1980	334.5 (estimated)	343.4

Source: Ohio annual population estimates provided by the Ohio Department of Economic and Community Development, Office of Population Statistics. Energy consumption figures computed by the Ohio Department of Energy.

U.S. annual population figures are from Statistical Abstract of the United States 1980. Energy consumption figures for the nation appear in the Monthly Energy Review, April 1981.

Table 8. Ratio of Ohio (U.S.) Energy Use to Gross State (National) Product, 1970-1979
(Btu's per 1972 dollar)

	U.S.			Ohio		
	GNP (trillion dollars)	Energy Consumption (10^{15} Btu's)	Energy Consumption per GNP dollar	GSP (billion dollars)	Energy Consumption (10^{12} Btu's)	Energy Consumption per GSP dollar
1973	1.255	74.609	59,449	62.614	3935.1	62,847
1974	1.248	72.759	58,300	60.662	3914.7	64,533
1975	1.234	70.707	57,299	58.624	3837.5	65,460
1976	1.300	74.510	57,315	62.552	3960.6	63,317
1977	1.372	76.332	55,636	65.476	3931.4	60,043
1978	1.437	78.150	53,249	67.854	3911.3	57,643
1979	1.493	78.968	51,462	67.991(e)	3908.9(e)	57,491(e)

Note: Gross state product figures were converted to constant dollars (1972 = 100) using implicit price deflators from Statistical Abstract of the United States 1980, U.S. Department of Commerce.

Source: Gross state product figures provided by the Ohio Department of Economic and Community Development. Energy consumption figures computed by the Ohio Department of Energy.

All United States data is from the Monthly Energy Review, April 1980, U.S. Department of Energy.

Table 9. Gross Energy Consumption by Fuel, 1980, Ohio vs. U.S.

	Ohio	U.S.
Coal	42.7%	20.6%
Petroleum	31.6%	41.6%
Natural Gas	25.1%	30.2%
Nuclear & Hydro	.5%	7.6%

Gross Energy Consumption by Sector, 1980

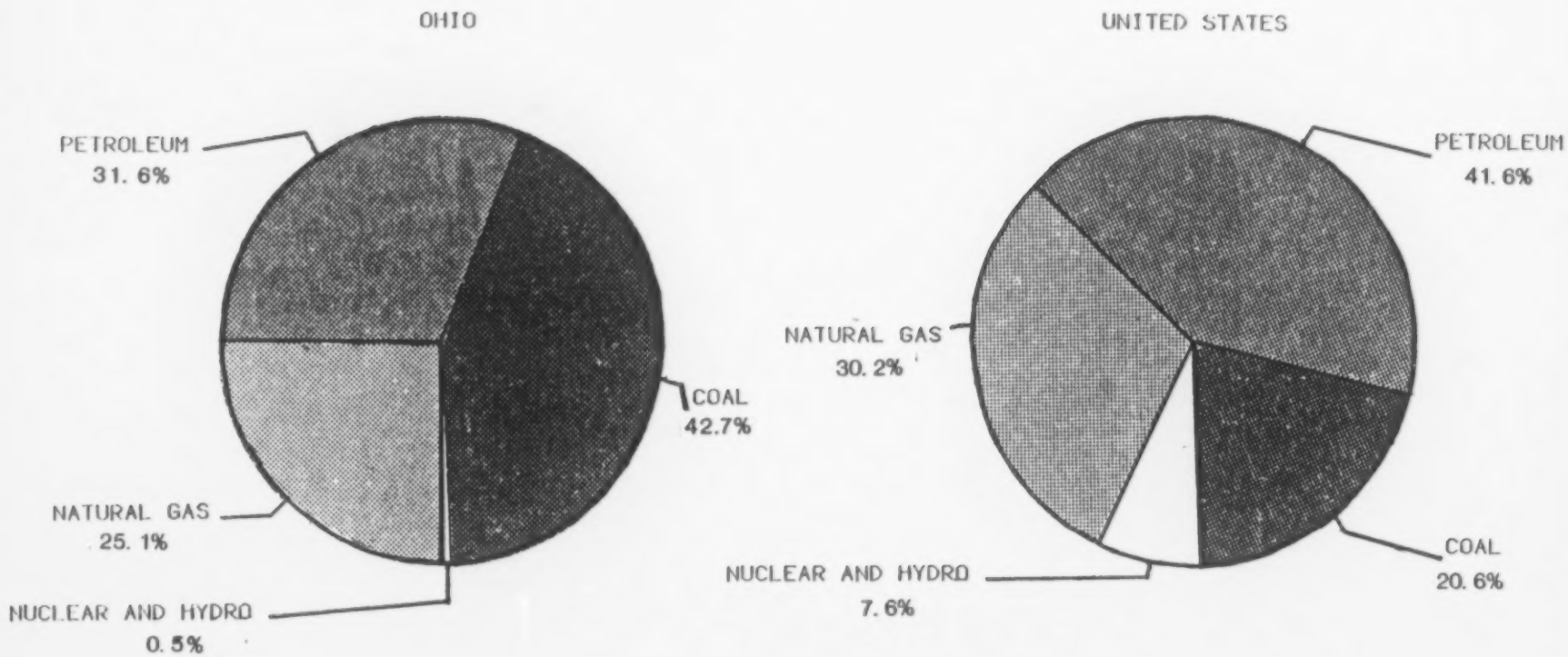
	Ohio	U.S.
Residential	16.8%	15.0%
Commercial	10.3%	11.7%
Industrial	30.9%	28.3%
Transportation	21.3%	24.4%
Energy for Net Generation	20.7%	20.6%

Petroleum Consumption by Product, 1980

	Ohio	U.S.
Gasoline	54.0%	39.8%
Jet Fuel	3.2%	6.8%
Distillate	12.0%	19.2%
Residual	2.7%	18.0%
Other (LPG, Kerosene, Diesel, Asphalt)	28.1%	16.2%

Figure 3.

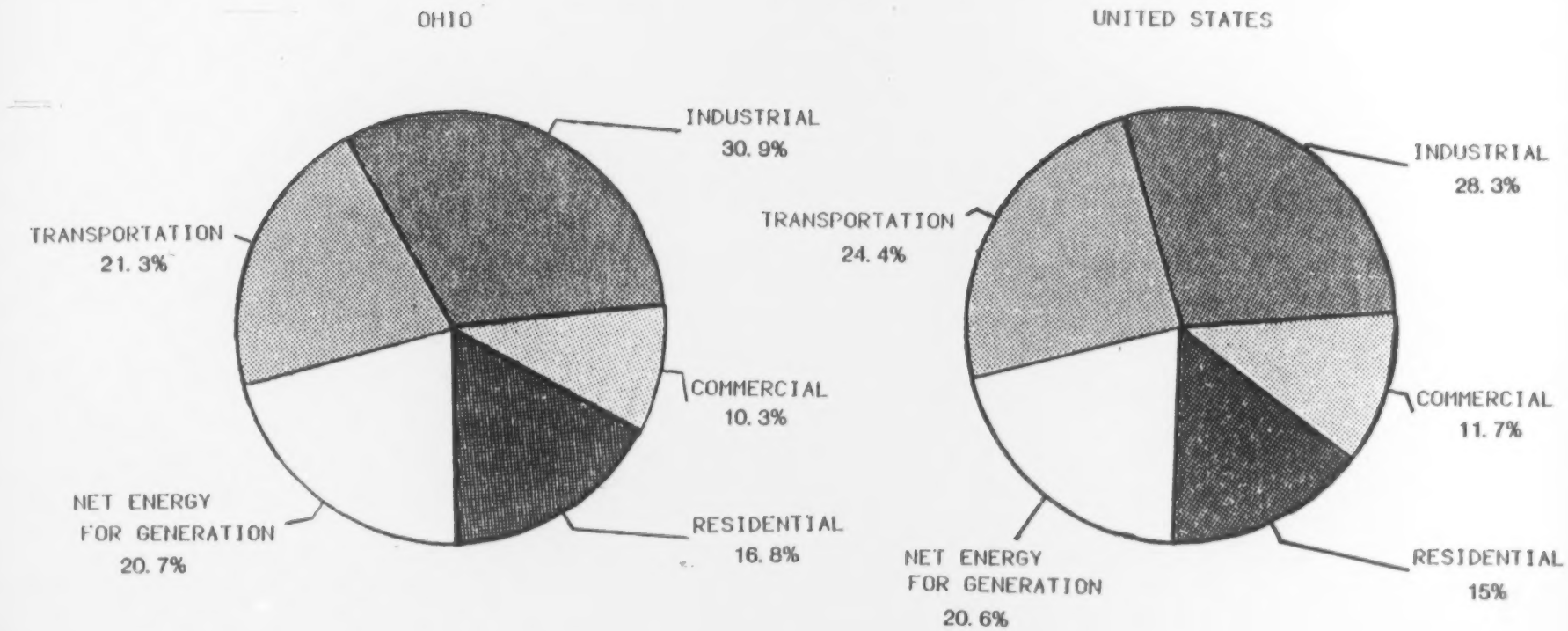
GROSS ENERGY CONSUMPTION BY FUEL, 1980



Source: Monthly Energy Review, April 1981, U.S. Department of Energy and Ohio Department of Energy.

Figure 4.

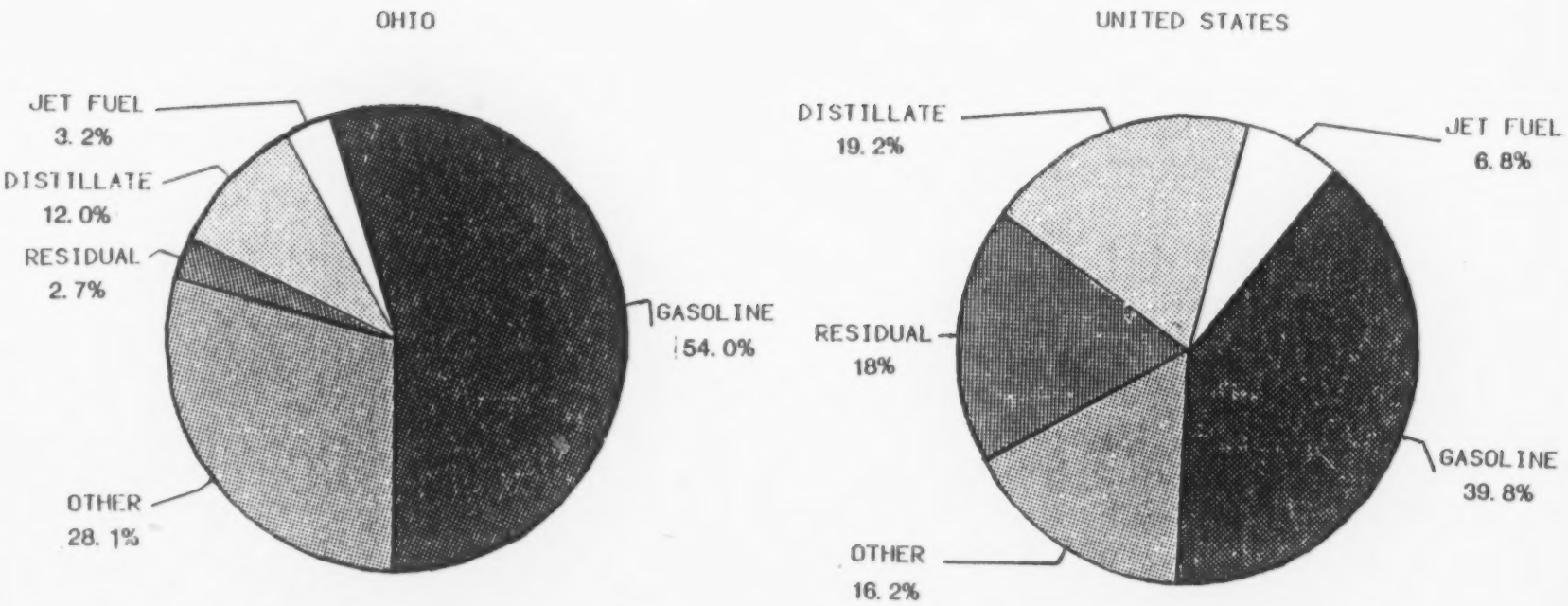
GROSS ENERGY CONSUMPTION BY SECTOR, 1980



Source: Monthly Energy Review, April 1981, U.S. Department of Energy and Ohio Department of Energy

Figure 5.

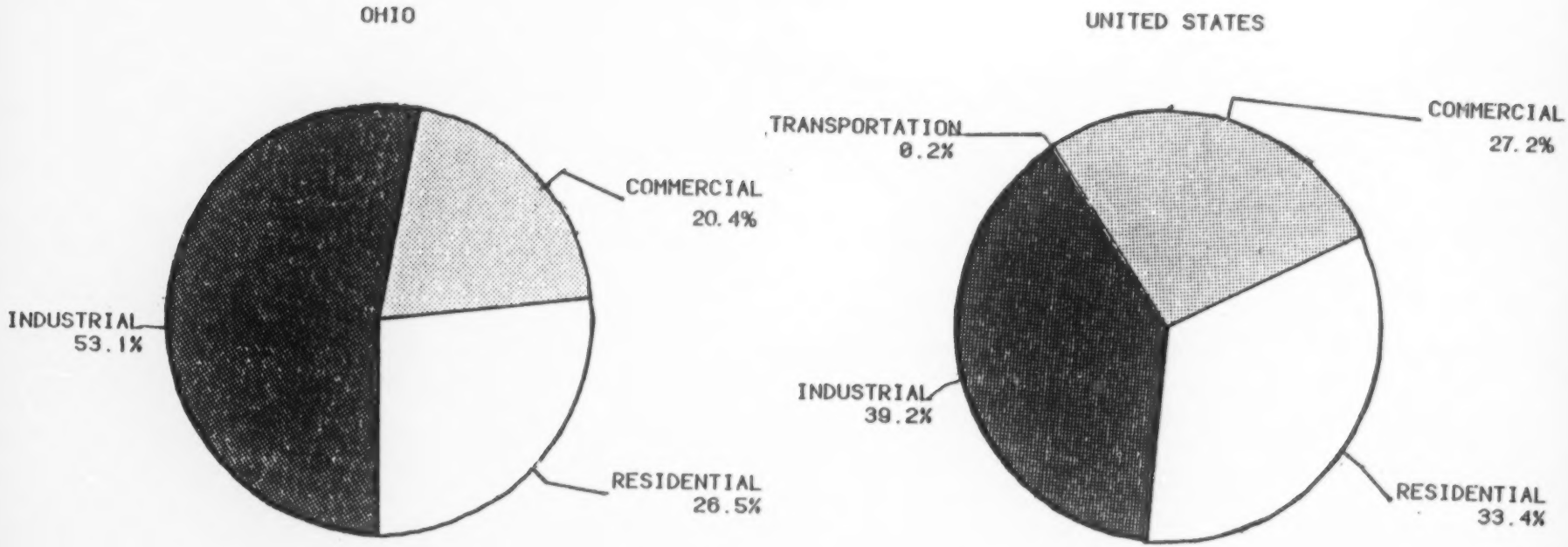
PETROLEUM CONSUMPTION BY PRODUCT, 1980



Source: Monthly Energy Review, April 1981, U.S. Department of Energy and Ohio Department of Energy.

Figure 6.

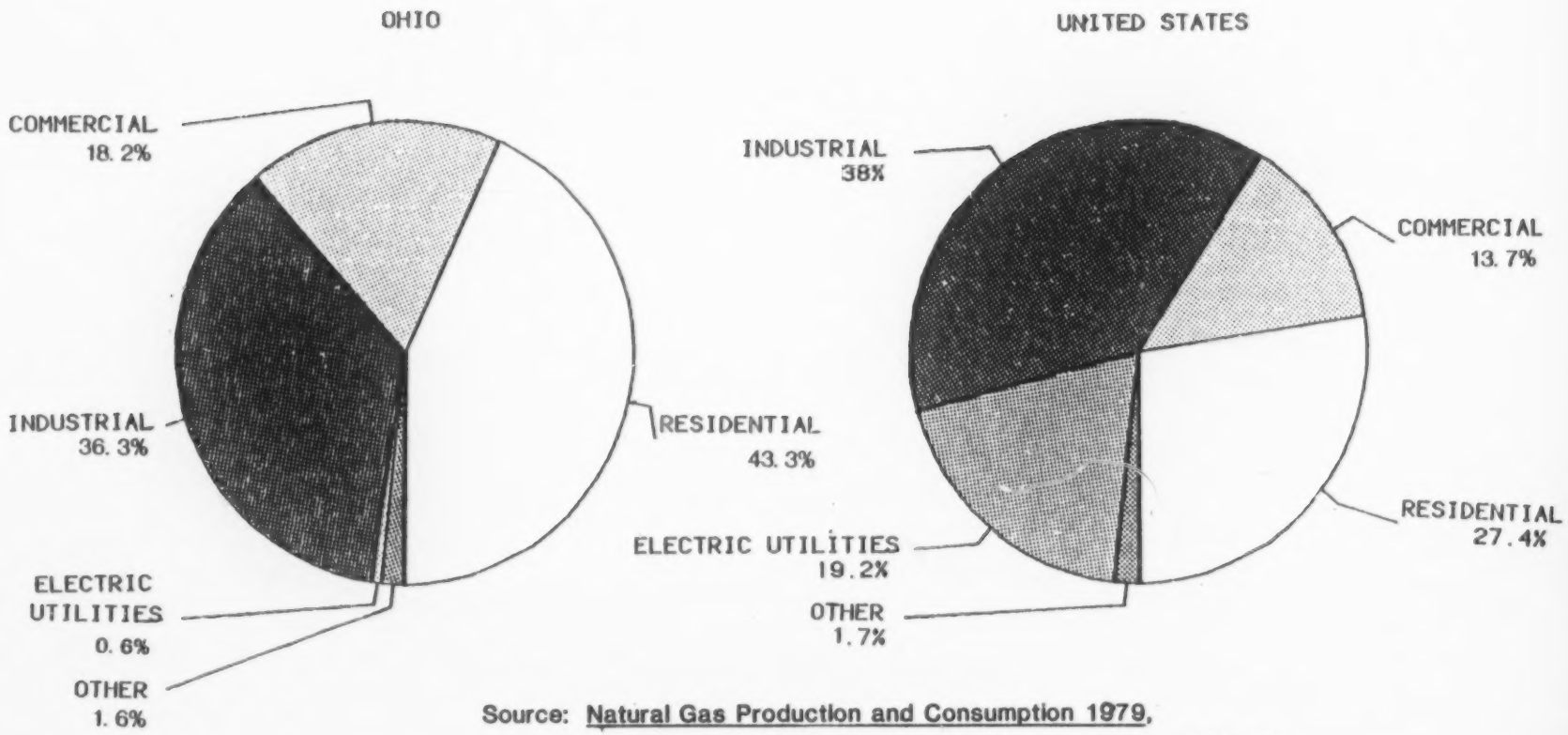
ELECTRICITY CONSUMPTION BY SECTOR, 1979



Source: E.E.I. Statistical Yearbook for 1979.

Figure 7.

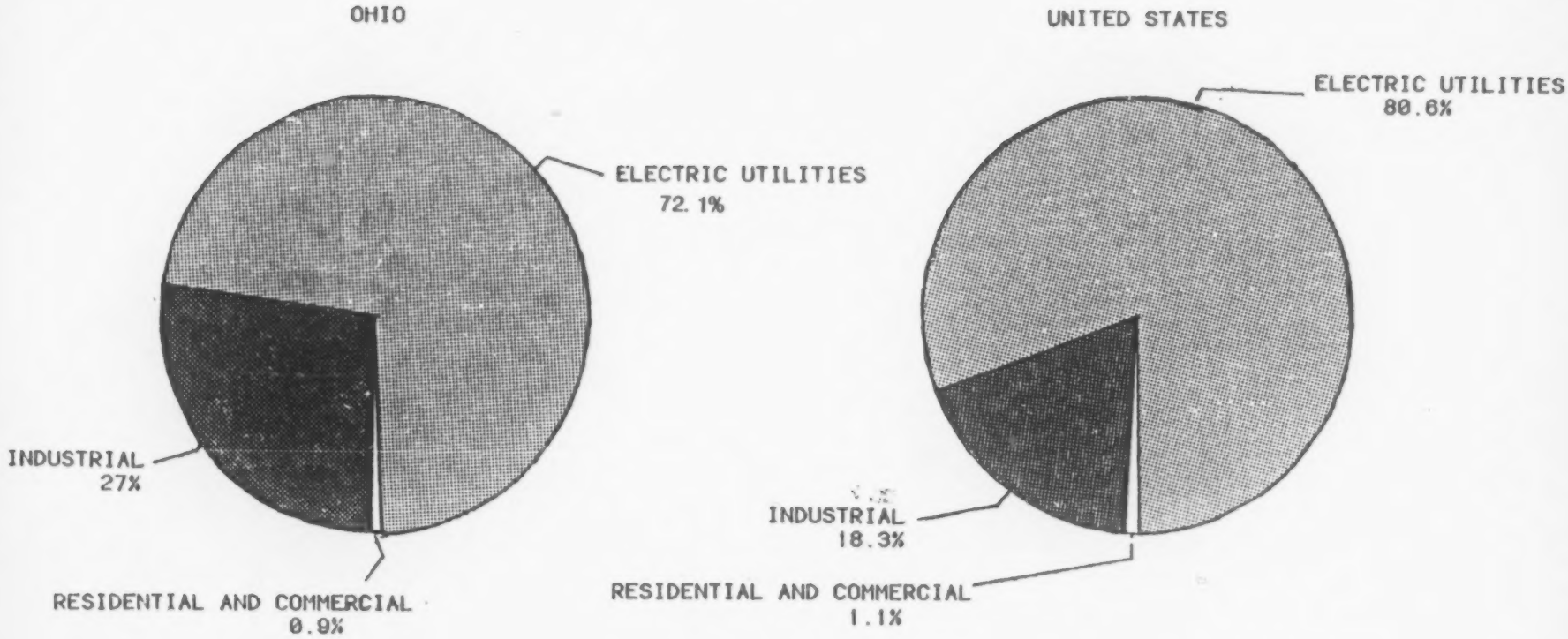
NATURAL GAS CONSUMPTION BY SECTOR, 1979



Source: Natural Gas Production and Consumption 1979,
U.S. Department of Energy and Ohio Department of Energy

Figure 8.

COAL CONSUMPTION BY SECTOR, 1980



Source: Monthly Energy Review, April 1981, U.S. Department of Energy and Ohio Department of Energy.

CONSUMER PRICES OF OHIO FUEL

A combination of the oil embargo and the ensuing price hikes by OPEC nations, inflation and phased decontrol of natural gas have combined to impose inordinate and unexpected price increases for petroleum and natural gas in Ohio within the past two years. While gasoline and fuel oil prices have stabilized--and even dropped a small amount--this condition should be considered only temporary because of the finite nature of the reserves and the instability of OPEC--our nation's source for over one-third of its supply.

As the price of imported oil rises, so will the price of natural gas. As decontrol continues on its current path, natural gas prices will eventually reach the level of imported oil, to which they are tied in price.

Electric prices have risen. In some geographic locations it is becaused oil-fired generators have suffered the OPEC price increases. In other locations it is because of decontrol of natural gas.

In Ohio the price of electricity has risen because of the increased price of coal; the inability to utilize two nuclear generating plants which consumers are paying for; antiquated coal-fired plants; Clean Air Act restrictions that require high capital investment or the expensive imports of low sulfur coal; and the current high interest rates that either inhibit or prohibit Ohio's electric utilities from plant investment for more efficient operation, including pollution control equipment which would permit burning low-cost, high-sulfur Ohio coal.

Table 10. Natural Gas Prices in Ohio, 1970 - 1980
(Dollars per MCF)

	Current Dollars			Constant Dollars		
	Residential	Commercial	Industrial	Residential	Commercial	Industrial
1970	.86	.75	.54	1.67	1.46	1.05
1971	.99	.84	.58	1.83	1.55	1.07
1972	1.05	.89	.64	1.86	1.58	1.13
1973	1.11	.97	.67	1.86	1.63	1.12
1974	1.27	1.10	.88	1.94	1.68	1.35
1975	1.56	1.39	1.15	2.18	1.94	1.60
1976	1.85	1.68	1.47	2.45	2.23	1.95
1977	2.30	2.13	2.01	2.88	2.67	2.52
1978	2.51	2.31	2.11	2.93	2.70	2.46
1979	2.87	2.65	2.39	3.08	2.84	2.56
1980	4.36	3.61	3.15	4.36	3.61	3.15

Note: All current dollar prices represent the average prices paid by Ohio consumers, with the exception of the 1980 current dollar figures, which represent prices for the first three quarters of 1980 for the entire East North Central region.

The constant dollar figures (1980 = 100) reflect the real price increases of natural gas, above the general inflation rate. They show the actual impact of natural gas price increases on consumers, given a constant rather than declining purchasing power of the dollar.

Source: Gas Facts, the American Gas Association; Statistical Abstract of the United States 1980, U.S. Department of Commerce.

Table 11. Electricity Prices in Ohio, 1970 - 1980

(Dollars per kWh)

	Current Dollars			Constant Dollars		
	Residential	Commercial	Industrial	Residential	Commercial	Industrial
1970	.0209	.0341	.0200	.0406	.0662	.0388
1971	.0219	.0352	.0219	.0405	.0651	.0405
1972	.0230	.0369	.0228	.0408	.0654	.0404
1973	.0233	.0372	.0234	.0391	.0624	.0393
1974	.0250	.0383	.0247	.0382	.0586	.0378
1975	.0345	.0484	.0322	.0481	.0675	.0449
1976	.0366	.0487	.0342	.0485	.0646	.0454
1977	.0421	.0540	.0415	.0528	.0677	.0520
1978	.0452	.0588	.0430	.0527	.0686	.0502
1979	.0491	.0627	.0474	.0526	.0672	.0508
1980	.0565	.0696	.0547	.0565	.0696	.0547

Note: All current dollar figures are based on population weighted state average monthly bills for cities of 2500 people and more. Residential figures represent the average price per kWh of 500 kilowatt-hours of consumption; commercial figures are based on consumption of 1500 kilowatt-hours per month; and industrial figures represent the average price of consuming 60,000 kilowatt-hours per month. All prices are as of January 1 of the respective years.

The constant dollar figures (1980 = 100) reflect the real price increases of electricity, above the general inflation rate. They show the actual impact of electricity price increases on consumers, given a constant rather than declining purchasing power of the dollar.

Source: Typical Electric Bills, Federal Power Commission (1970-1977), Typical Electric Bills, U.S. Department of Energy (1978-1980), Statistical Abstract of the United States 1980, U.S. Department of Commerce.

Table 12. Gasoline Prices for Selected Cities In Ohio, 1973-1981
(Dollars per Gallon)

	Leaded Regular		Unleaded Regular		Leaded Premium	
	Cincinnati	Cleveland	Cincinnati	Cleveland	Cincinnati	Cleveland
1973	.45	.45	NA	NA	.49	.48
1974	.53	.53	NA	NA	.57	.57
1975	.58	.59	NA	NA	.63	.63
1976	.59	.59	.61	.61	.64	.64
1977	.61	.61	.65	.64	.67	.66
1978	.65	.65	.69	.69	.72	.72
1979	.97	.97	1.02	1.02	1.04	1.03
1980	1.16	1.18	1.23	1.23	NA	NA
1981	1.30	1.32	1.37	1.42	NA	NA

Note: All prices are as of December, except for 1979, which is November's price, and 1981, which is April's price.

Source: News, U.S. Bureau of Labor Statistics.

Table 13. Historical Prices of Heating Oil for Ohio, 1970 - 1980

Year	Residential	Commercial	Industrial
1970	NA	----	----
1971	NA	----	----
1972	NA	----	----
1973	NA	----	----
1974	NA	----	----
1975	NA	----	----
1976	.38	----	.36
1977	.43	----	.39
1978	.46	----	.42
1979	.52	----	.77
1980	.90	----	.91
1981*	1.05	----	----

Note: Figures are representative of DOE Region 5, and the East North Central geographical region.

*1981 figure based on January data only.

Source: Monthly Energy Review; Monthly Petroleum Product Price Report, Federal Energy Administration.

OHIO ENERGY PRODUCTION AND RESERVES

Ohio is an energy-intensive state, principally because of our strong industrial base, our aged housing stock, and the wide temperature extremes generally experienced here. Ohio is also an energy-producing state. Not to the extent of the traditional Southwestern and Gulf states, but we do have significant production capabilities and reserves to assist in the reduction of out-of-state imports and the consequent export of Ohio dollars.

Coal is Ohio's largest energy resource. We have an estimated 18.978 billion tons of economically recoverable coal in Ohio, although it is almost all high sulfur coal which presents environmental problems in utilization. For this reason, Ohio coal's share of the total coal use in Ohio has been dropping steadily since the passage of the Clean Air Act and Amendments. Ohio is the largest user of coal in the United States, consuming an estimated 67.3 million tons in 1980. Of this, 43.6 percent (29.4 million tons) was produced from Ohio mines in 1980. This is well below any year in the past decade, both in raw tons and in percentage.

Exports of Ohio coal to other states has also dropped significantly during the past decade, from 19.6 million tons in 1970 to 9.9 million tons in 1980, a drop of nearly 50 percent in the eleven year period.

Coal continues to be the major fuel for the generation of electricity in Ohio, representing about 98 percent of the fuel for net generation. By the mid-1980's Ohio should have three nuclear plants in operation, which will decrease total utility use of coal, however it is our belief that the majority of the coal displaced will be out-of-state coal.

Ohio is currently a net importer of electricity, with the major purchasers of out-of-state generation being Toledo Edison, Cleveland Electric Illuminating Company and Ohio Edison. However as the Davis-Besse nuclear generating plant is fully operational and the other two nuclear plants (Zimmer and Perry) come on line, most of the net imports and the resultant costs to the consumer are expected to be reduced.

Ohio also has extensive reserves of natural gas and oil, and these reserves should continue to climb as deregulation and decontrol progress. As the price of crude oil climbs through deregulation, many oil fields once thought to be economically depleted are now coming back into play. Ohio can never even approach self-sufficiency in petroleum because our production is only a small fraction of the state's requirements, and the grade of oil produced here is more adaptable to finishing into lubricants than into gasoline. However, the additional crude oil production we anticipate will add millions of dollars to the state's economy.

The past ten years have seen a boom in natural gas production in Ohio. In 1980, producers drilled almost three times as many wells as in 1972. Last year Ohio produced record volumes of natural gas--about 15 percent of state requirements--and as transportation facilitities are upgraded and expanded, significant additional volumes of Ohio produced gas are expected to flow.

Table 14. Electric Generating Capacity Serving Ohio, 1980, 1985, 1990
(Megawatts)

	1980	1985	1990
Coal	30,569.9	32,854.9	34,895.9
Oil and Gas	2,032.9	1,729.9	1,525.9
Nuclear	1,569.0	3,435.0	4,582.0
Hydro, Pumped Storage	365.0	396.5	793.0
Total	34,536.8	38,416.3	41,796.8

Source: Ohio Electric Utilities' Ten-Year Forecasts, Forms FE-6 and FE-7 (C).

Table 15. Ohio Electric Utility Energy Account, 1978-1980

	1978			1979			1980		
	Physical Units	TBtu	Percent of Total	Physical Units	TBtu	Percent of Total	Physical Units	TBtu	Percent of Total
Deliveries									
Coal (tons)	46,533,855	1143.8	96.6	52,893,900	1300.1	97.9	49,029,300	1205.14	98.6
Oil (barrels)	6,538,400	38.1	3.2	4,464,000	26.0	2.0	2,329,500	13.6	1.1
Natural Gas (MCF)	2,405,900	2.5	0.2	2,051,100	2.1	0.2	3,235,400	3.3	0.3
Consumption									
Coal (tons)	48,580,077	1194.1	96.5	51,493,046	1265.7	97.7	47,917,401	1177.8	98.6
Oil (barrels)	6,970,823	40.6	3.3	4,470,256	26.0	2.0	2,170,160	12.6	1.1
Natural Gas (MCF)	2,285,642	2.4	0.2	4,169,184	4.3	0.3	3,750,299	4.0	0.3
Generation (MWH)									
Coal	102,192,489	348.8	95.4	110,952,383	378.6	95.8	106,209,896	362.4	97.3
Oil	2,754,001	9.4	2.6	1,645,722	5.6	1.4	701,757	2.4	0.6
Natural Gas	87,729	0.3	0.1	102,252	0.3	0.1	168,491	0.6	0.2
Nuclear	2,056,880	7.0	1.9	3,163,138	10.8	2.7	2,119,116	7.2	1.9

Note: Figures are for eight major electric utilities generating electricity in Ohio. Buckeye Power, municipal and industrial utilities are excluded. Percent totals may not add to 100 due to independent rounding errors.

Source: FPC Forms 4 and 423 and the Ohio Department of Energy.

Table 16. Ohio Imports and Exports of Electricity in 1980
(megawatt-hours)

	Net Energy for Load	Net Generation	Energy bought (sold) from (to) other utilities
Buckeye Power	3,689,607	7,607,000	(3,917,393)
Cincinnati Gas and Electric	13,588,028	14,663,751	(1,075,723)
Cleveland Electric Illuminating	18,536,985	15,325,948	3,211,037
Columbus and Southern	9,708,540	10,540,257	(831,717)
Dayton Power and Light	11,063,458	10,623,798	439,660
Monongahela	573,620	0	573,620
Ohio Edison	20,286,609	15,917,205	4,369,404
Ohio Power	29,894,760	26,020,968	3,873,792
Ohio Valley Electric Corporation	6,629,072	6,735,096	(106,024)
Toledo Edison	7,840,642	6,488,587	1,352,055
Total	121,811,320	113,922,610	7,888,710

Note: In 1980, Ohio was a net importer of 7,888,710 mWh of electricity.

Source: Form FE-1(A) of the Ohio Electric Utility Ten Year Forecasts.

Table 17. Ohio Proven Reserves by Fuel, 1970-1980

Year	Crude Oil (1000 Bbls.)	Natural Gas (MMcf)	Coal (Million Short Tons)
1970	127,912	557,455	20,787
1971	129,144	615,477	17,798
1972	127,385	715,151	20,680
1973	124,911	808,641	NA
1974	123,871	960,662	21,077
1975	121,263	969,020	NA
1976	125,268	1,025,950	19,230
1977	129,148	1,093,150	19,157*
1978	131,194	1,711,511	19,090*
1979	137,718	1,313,333	19,035
1980	NA	1,436,629	18,978*

NA: Not Available

*: ODOE estimates (Based on USDOE EIA methodology and Ohio coal production figures).

Sources: Ohio Department of Natural Resources, Division of Oil and Gas. Summary of Ohio Oil and Gas Developments in 1980.

U.S. Department of Interior, Bureau of Mines. Minerals Yearbook. (Coal data, 1970-1974.) USDOE Energy Information Administration. Demonstrated Reserve Base of Coal in the U.S. (1976 - present)

Table 18. Ohio Gross Energy Production by Fuel, 1970 - 1980

Year	Crude Oil (Thousand Bbls.)	Natural Gas (MMcf)	Coal (Thousand Short Tons)
1970	9,864	73,759	55,137
1971	9,670	82,678	49,017
1972	9,358	90,487	50,572
1973	8,796	94,121	45,666
1974	9,088	94,376	45,352
1975	9,578	85,810	46,673
1976	9,994	89,770	46,804
1977	10,359	99,656	46,940
1978	11,154	115,239	38,840
1979	11,953	124,665	42,900 (2)
1980	12,928	138,856 (1)	39,500 (3)

(1) Natural gas production in 1980 includes an estimated 2,723 MMCF produced and sold but not reported and gas utilized in the field.

(2) Coal Age, February 1980 p. 62 (based on USDOE and Keystone estimates)

(3) Preliminary figure from USDOE

Source: Summary of Ohio Oil and Gas Developments in 1979, Ohio Department of Natural Resources; and Division of Mines, Ohio Department of Industrial Relations.

Table 19. Ohio Bituminous Coal Use by Source, 1970-1980
(Thousand Short Tons)

Year	Western Coal	Eastern Coal	Total Imports	Ohio Coal	Ohio Exports	Total Use
1970	-0-	31,822	31,822	35,553	19,584	67,375
1971	-0-	29,513	29,513	33,603	15,414	63,116
1972	-0-	32,665	32,665	35,130	15,422	67,795
1973	-0-	32,348	32,348	33,409	12,257	65,557
1974	1,172	35,426	36,598	33,044	12,308	69,642
1975	1,433	33,118	34,551	33,468	13,205	68,019
1976	3,372	32,191	35,563	35,401	11,403	70,904
1977	4,841	33,051	37,892	36,240	10,700	74,132
1978	4,700	32,504	37,204	30,707	8,133	67,912
1979	3,835	36,908	40,745	32,059	11,619	72,804
1980	2,484	35,357	37,841	29,360	9,923	67,201

(1) Eastern Region includes Maryland, Pennsylvania, West Virginia, Virginia, Kentucky, North Carolina, Tennessee, Indiana, Alabama, Georgia, Arkansas and Oklahoma. Western region includes Idaho, Utah, Wyoming, and North and South Dakota.

(2) Totals may not equal the sum of components due to independent rounding.

Source: USDOE Energy Information Administration. Coal Distribution (formerly Bituminous Coal and Lignite Distribution.) (DOE/EIA-0125 (80), Tables 8 and 9.)

Table 20. Surface and Underground Production of Ohio Coal, 1973-1980
(Thousand Tons)

	1973	1974	1975	1976	1977	1978	1979 (1)	1980 (2)
Underground Production	16,209.4	14,415.5	15,469.3	16,707.6	14,004.2	11,389.2	12,870	10,400
Surface Production	29,457.1	30,936.1	31,203.6	30,096.3	32,936.0	28,705.0	30,030	29,100
Total Production	45,666.5	45,351.6	46,672.8	46,803.9	46,940.1	40,094.2	42,900	39,500

Source: Ohio Bureau of Industrial Relations, Division of Mines.

(1) Coal Age, February 1980 (based on USDOE and Keystone estimates)

(2) Preliminary USDOE figure.

Table 21. Well Completions in Ohio, 1970-1980 (*)

Year	Gas Wells		Oil Wells		Combination Wells		Dry Holes		Total Wells
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	
1970	517	38.15	325	23.99	323	23.83	190	14.02	1,355
1971	542	43.78	244	19.70	279	22.53	173	13.97	1,238
1972	588	45.47	178	13.77	359	27.76	168	12.99	1,293
1973	759	50.53	145	9.65	432	28.76	166	11.05	1,502
1974	768	43.49	247	13.99	584	33.07	167	9.46	1,766
1975	417	34.18	208	17.05	480	39.34	115	9.43	1,220
1976	816	42.14	213	11.00	743	38.37	164	8.47	1,936
1977	844	32.16	372	14.18	1,237	47.14	171	6.52	2,624
1978	844	32.39	273	10.47	1,273	48.85	216	8.29	2,606
1979	1,097	31.86	251	7.29	1,927	55.97	168	4.88	3,443
1980	818	24.37	276	8.22	2,154	64.18	108	3.22	3,356

(*) Does not include wells reopened, gas storage wells, secondary recovery or service wells.

Source: Ohio Department of Natural Resources Division of Oil and Gas. Summary of Ohio Oil and Gas Developments in 1980.

Table 22. Sources of Gas Supply for Ohio Natural Gas Utilities, 1979-1980
(Annual Purchases in MMCF)

	Interstate		Ohio Production		Green Springs		Other and Storage		Total	
Company	1979	1980	1979	1980	1979	1980	1979	1980	1979	1980
Cincinnati G & E	84,827	81,887	2,193	1,407	6,205	6,195	153	12	93,378	89,501
Columbia Gas	326,589	318,418	6,382	5,164	23,825	23,906	(699)	359	356,097	347,847
Dayton P&L	63,054	61,660	------	------	4,393	------	------	------	67,447	61,660
East Ohio	325,951	291,394	53,592	52,437	------	------	64,428	61,687	443,971	405,518
National Gas	8,473	8,888	5,325	5,930	------	------	802	707	14,600	15,525
Ohio Gas	6,632	6,192	683	772	------	------	361	265	7,676	7,228
River Gas	3,216	2,890	1,728	1,684	------	------	------	------	4,944	4,574
West Ohio	14,151	13,300	------	------	940	889	------	------	15,091	14,189
Total	832,893	784,629	69,903	67,394	35,363	30,990	65,044	63,030	1,003,204	946,043
% of Total	83.0%	82.9%	6.9%	7.1%	3.5%	3.3%	6.4%	6.7%	100.0%	100%
% Change from 1979	-5.8%		-3.6%		-12.4%		-3.1%		-5.7%	

Note: Components may not add to total because of rounding.

Source: Monthly reports of eight major Ohio gas utilities compiled by ODOE.

Table 23. Transmission of Self-Help Gas in Ohio, 1973-1980
(MMCF)

1973-1974	1974-1975	1975-1976	1976-1977	1977-1978	1978-1979	1979-1980
81.88	649.24	795.89	5,271.34	9,327.38	9,604.21	8,167.30

Note: Figures include only self-help gas carried through utility pipelines directly to end users under a transportation contract. They do not include self-help gas transported by proprietary pipelines or under other special contractual arrangements. Contract year is from November 1 through October 31.

Source: Public Utilities Commission of Ohio.

PROJECTED ENERGY CONSUMPTION IN OHIO AND THE TOTAL U.S. - 1990

The following Tables present the Ohio Department of Energy's projection for the State's fuel demand in the year 1990, plus the national energy demand as projected by a number of recognized experts. It is with great hesitation that we submit these projections because of the many uncertainties involved in dealing with circumstances ten years hence.

As an example, in 1971 we had not as yet experienced the oil embargo and the ensuing price escalation, nor had we anticipated gasoline shortages which would disrupt the market. Certainly, in 1971, few economists would have predicted that Ohioans would use less energy in 1980, but that is how it has turned out.

For these reasons we have provided three estimates for 1990 for each consuming sector--a low-, mid- and high- range projection. The mid-range estimate suggests that Ohio will be using about the same amount of energy in 1990 as was used last year, with the only sectoral reduction occurring in transportation. However, the remaining sectors, while they are projected to increase consumption, will show very small gains, far less than historic patterns.

Should these scenarios be on or close to what happens, there will be sufficient energy supplies to sustain the needs of Ohio in 1990--barring a major international incident which would disrupt not only Ohio, but the entire nation and the world beyond.

Table 24. Projected Energy Consumption in Ohio, 1990
(TBtu)

	1980	1990		
		Low	Estimate	High
Residential Sector	606.26	591.9	623.0	654.2
Commercial Sector	371.31	358.2	377.0	395.9
Industrial Sector	1,116.08	1,102.0	1,160.0	1,218.0
Net Energy for Generation	748.87	756.2	796.0	835.8
Transportation	769.47	685.0	721.0	757.1
Total Energy Consumption	3,611.99	3,493.2	3,677.0	3,860.9

Source: Ohio Department of Energy.

Table 25. U.S. Energy Demand Projections for 1980-1990 Various Forecasts Since 1974
(In quadrillion Btu's)[5]

Title	Year Under Taken	Agency	Energy Consumption Projections 1980	1985	1990
A Time To Choose	1974	Ford Foundation	90.0	95.05	----------
Project Independence	1974	FEA ($11 B/C)	86.4	102.89	----------
U.S. Energy Prospect	1974	NAE	----------	104.16	----------
CIAB Recommendations for a National Energy Program	1975	Commerce	----------	107.97	----------
U.S Energy Through the Year 2000	1975	BOM	87.22	103.52	----------
An Assessment of U.S. Energy Policy	1976	Levy	----------	103.52	----------
National Energy Outlook	1976	FEA	[1]81.72	98.86	116.01
			[2]85.32	103.31	121.73
Towards Project Interdependence	1975	CRS (B/C)	88.07	100.98	----------
World Energy Outlook	1977	OECD (B/C)	85.74	101.83	----------
U.S Energy Outlook	1977	CIA	88.91-91.24	102.04-106.70	----------
Do	1977	Exxon	86.37	96.32	109.03
Do	1978	---do	85.73	95.05	107.97
Do	1977	Shell	88.07	101.83	116.86
Do	1978	---do	85.10	95.48	107.12
Working on Alternative Systems	1977	MIT (C)	----------	92.09	----------
		MIT (D)	----------	94.42	----------
National Energy Plan	1977	Executive Office of the President	----------	98.23	----------
Projections of Energy S. & D. and Their Impacts	1978	EIA (medium case)	----------	94.63	108.60
			----------	[3]96.96	109.45
Technical Analysis of International Oil Market	1978	Frankel	86.59	98.44	109.03
World Energy Model	1978	SRI	84.47	93.36	103.73
Project Interdependence	1978	CRS	85.53	95.48	109.03
Outlook for World Oil into the 21st Century	1978	Lichtblau (B/C)	84.47	96.32	107.12
	([4])	----------	81.72-91.24	92.09-107.97	107.12-121.73

[1] $13
[2] $8
[3] High
[4] Range
[5] Conversion factor: 5,800,000 Btu's per barrel of oil.

Source: The Energy Factbook, prepared by the Congressional Research Service of the Library of Congress, November 1980, p. 74.

Table 26. Projections of Petroleum and Coal Liquids Production: Comparison of 1990 Forecasts
(Quadrillion Btu's)

		1990 Projections						
	1978 Actual	1979 Annual Report Middle	1978 Annual Report C-High	Shell[a]	DRI[b]	Pace[c]	Exxon[d]	Tenneco[e]
Conventional Crude Oil Production								
Lower-48 States, Onshore								
From Proved Reserves	13.13	2.63	2.75	2.77	8.28	-	4.02	-
From Indicated Reserves	-	1.86	1.95	1.35	-	-	.72	-
From New Discoveries	-	4.72	7.96	2.37	4.97	-	1.27	-
Subtotal	13.13	9.19	11.86	6.50	13.25	9.31	5.72	-
Lower-48 States, Offshore								
From Proved Reserves	2.43	.53	.42	.40	-	-	.85	-
From Indicated Reserves	-	.47	.64	.47	-	-	.42	-
From New Discoveries	-	1.40	3.66	.80	-	-	1.06	-
Subtotal	2.43	2.39	4.72	1.67	-	2.12	2.33	-
Total Lower-48 States	15.56	11.58	16.58	8.17	13.25	11.43	8.04	17.36
North Alaska								
From Proved Reserves	2.31	1.95	2.10	2.90	-	-	2.33	-
From Reserve Additions	-	1.23	1.69	3.39	-	-	.72	-
Subtotal	2.31	3.20	3.79	6.29	3.39	3.60	2.75	5.50
Enhanced Oil Recovery	.57	2.84	3.11	1.78	.99	1.48	1.27	-
Unconventional Crude Oil Production								
Shale Oil and Tar Sands	-	.53	.42	.32	.64	.42	1.27	.72
Coal Liquids	-	-	-	.53	.64	-	.85	-
Natural Gas Liquids Production	3.32	2.1	2.67	2.39	3.20	2.12	.85	-
Total Petroleum and Coal Liquids Production	21.74	20.24	26.55	19.48	22.10	19.05	15.03	23.29

[a]Shell Oil Co., National Energy Outlook 1980-1990, February 1980.
[b]Data Resources, Inc., Energy Review, Winter 1980.
[c]The Pace Company Consultants and Engineers, Inc., The Pace Energy and Petrochemical Outlook to 2000, October, 1979.
[d]Exxon Company, U.S.A., Energy Outlook 1980-2010, December 1979.
[e]Tenneco Oil Company, Energy 1979-2000, June 1979. (Alaskan figure includes South Alaska.)

Note: - Indicates not available. Conversion Factor: 5,800,000 Btu's per barrel of oil.

Source: The Energy Factbook, prepared by the Congressional Research Service of the Library of Congress, November 1980, p. 96.

Table 27. U.S. Coal Production Projections, 1985 and 1990*
(million tons)

		DOE (1)	FEA (2)	BOM (3)	WAES (4)	EEA (5)
1985	High	1055	1280	-	1040	-
	Medium	1034	1040	923	950	1050
	Low	994	837	-	800	-
1990	High	1348	1414	(a)	(a)	-
	Medium	1257	1307			1200
	Low	1145	1041			-

*Difference between production and consumption represents tonnage held in stockpiles plus exports. (60-100 million tons should be subtracted to account for exports in 1990).

(a) - BOM AND WAES do not project to 1990.

Sources:

(1) DOE - USDOE Energy Information Administration. Annual Report to Congress, Volume II, 1977.

(2) FEA - U.S Federal Energy Administration. National Energy Outlook, 1976.

(3) BOM - U.S. Dept. of Interior. Bureau of Mines. United States Energy Through the Year 2000 (Revised), 1975.

(4) WAES - Workshop on Alternative Energy Strategies. Energy: Global Prospects 1985-2000, 1977; and Energy Supply to the Year 2000, 1977.

(5) EEA - Mann, Charles E. and James H. Heller. Coal and Profitability. McGraw-Hill Publications Co., 1978. (Energy and Environmental Associates).

(Chart adapted from the President's Commission on Coal. Coal Data Book. February 1980.)

Table 28. Detailed Comparison of the Exxon 1/, 79 ARC 2/, Lewin 3, and Shell 4/
Natural Gas Supply Projections, 1990 and 2000

(Quads/Year)

	1990				2000			
	Lewin	Exxon	79 ARC	Shell*	Lewin	Exxon	79 ARC	Shell
Domestic								
Conv. Lower 48 and Offshore	11.5	14.2	14.8	13.3	9.3	10.4	11.4	11.2
Alaska	0.8	0.9	0.9	**	1.0	0.9	1.6	**
Unconventional	3.0	**	3.0	2.4	3.0	4/	3.4	5.3
Subtotal	15.3	15.1	18.7	15.7	13.3	11.3	16.4	16.5
Imports								
Overland (Canada, Mexico)	2.0	1.8-2.1	0	0.6	1.5	2.0-2.7	0	0.6
Liquefied Natural Gas	1.3	0.6-0.9	0.8	0.8	1.3	0.8-1.2	0.7	0.6
Subtotal	3.3	2.6-3.0	0.8	1.4	2.8	2.8-3.9	0.7	1.2
TOTALS	18.6	17.7-18.1	19.5	17.1	16.1	14.1-15.2	17.1	16.9

1/ World Energy Outlook, Exxon, December 1979.

2/ USDOE Energy Information Administration. Annual Report to Congress, 1979.

3/ Kuuskraa, Vello (Lewin & Associates), "The Need and Urgency for Unconventional Gas" (Presented at Joint Society of Petroleum Engineers/DOE Symposium on Unconventional Gas Recovery, May 18-21, 1980.)

4/ Shell Oil Company Energy Economics Division data (for 1991) (Added to table by ODOE)

Note: Data converted to quads from MMB/DCOE - Columns may not add to totals due to rounding.

* 1991 data

** Not broken out. (Included with Conventional Lower 48 data.)

Source: U.S. Department of Energy. Office of Plans and Technology Assessment. "Analysis of the Market and Product Costs for Coal-Derived High BTU Gas". (Staff Working Paper, December 1980). (DOE/FE-0011)

Table 29. U.S. Energy Supply Projections for 1980-90 Various Forecasts Since 1974

			Domestic Supply								
			Oil (Quadrillion Btu's)			Natural Gas (Quadrillion Btu's)			Coal (Quadrillion Btu's)		
Title	Year	Agency	1980	1985	1990	1980	1985	1990	1980	1985	1990
U.S. Energy through the Year 2000	1972	BOM	24.3	24.1	----	23.6	24.5	----	18.63	24.29	----
U.S. Energy Outlook	1972	NPC (Case I)	28.8	32.8	----	26.9	32.9	----	24.12	37.02	----
		Case II	27.3	29.4	----	25.2	28.1	----	20.66	26.74	----
		Case III	24.6	25.0	----	21.1	21.9	----	20.66	26.74	----
		Case IV	18.8	49.1	----	17.8	15.5	----	19.57	23.67	----
A Time To Choose	1974	Ford Foundation	----	30.1	(36.0)	----	26.5	(32.0)	----	16.60	(22.83)
Project Independence	1974	FEA (BAY and AD) ($11 oil)	25.8-28.6	31.1-37.9	NA	21.3-23.2	25.6-15.5	NA	----	23.53-25.58	----
Energy Self-Sufficiency: An Economic Evaluation[1]	1974	MIT: (1) Econometric Model ($11 oil)	31.1	NA	----	36.1	----	----	17.57	----	----
		(2) Judgmental Model ($11 oil)	28.8	----	----	24.5	----	----	17.57	----	----
CIAB/Commerce	1975	Commerce Department	----	25.4	----	----	22.7	----	----	28.30	----
U.S. Energy through the Year 2000	1975	Bureau of Mines	25.2	31.3	NA	19.6	19.3	NA	19.01	23.53	NA
		($8 oil)	25.2	24.1	18.6	20.8	21.0	19.7	18.56	21.08	24.55
National Energy Outlook	1976	FEA (ref. case $8 oil)	26.9	29.2	29.2	21.2	23.0	22.7	18.84	24.50	30.82
Towards Project Interdependence	1975	CRS	23.3	25.4	NA	17.5	19.6	NA	18.86	21.22	NA
An Assessment of U.S. Foreign Policy	1976	Walter Levy	24.3	26.3	NA	19.2	19.8	NA	20.99	24.76	NA
World Energy Outlook	1977	OECD	22.9	24.6	NA	18.0	21.5	NA	18.84	24.50	NA
U.S. Energy Outlook	1977	CIA	21.2	21.2-23.3	NA	19.3-20.5	18.1-20.3	NA	20.75-22.40	23.11-26.36	NA
	1976	Shell Oil Company	22.0	23.1	25.6	18.1	17.3	14.7	17.35	22.85	29.60
	1978	do	20.1	19.9	21.4	17.1	15.2	13.1	18.86	23.51	31.60
	1978	Exxon	21.0	22.4	24.8	16.1	15.9	15.5	19.19	25.47	34.71
Energy Supply and Demand	1978	EIA/DOE (med.)	----	22.9	22.0	----	17.2	16.7	----	24.38	29.64
Do	1978	Frankel	22.2	24.3	25.4	17.9	19.1	17.9	18.63	24.05	30.65
Do	1978	SRI	21.8	22.7	23.1	21.1	22.8	23.2	17.92	22.78	28.77
Project Interdependence	1978	CRS	21.2	23.1	24.1	17.9	17.4	17.4	18.27	22.17	28.89
Outlook for Oil in the 21st Century	1978	Lichtblau	20.5	21.8	22.0	17.7	17.0	16.6	19.81	24.76	29.71

[1]Energy demand econometric model: 46,000,000 (barrels per day) oil equivalent in 1980. Energy demand judgment model: 39,400,000 (barrels per day) oil equivalent in 1980. No data available for 1985 and 1990.
[2]Data in parentheses are for the year 2000.
[3]Conversion factors: 5,800,000 Btu's per barrel of oil, 1,031 Btu's per cubic foot of natural gas; 23,580,000 Btu's per short ton of coal; 3412 Btu's per kWh equivalent of nuclear generation.

Source: The Energy Factbook, prepared by the Congressional Research Service of the Library of Congress, November 1980, p. 66.

Table 29. U.S. Energy Supply Projections for 1980-90 Various Forecasts Since 1974 (Continued)

			Domestic Supply								
			Nuclear (Quadrillion Btu's)			Other (Quadrillion Btu's)			Oil Imports (Quadrillion Btu's)		
Title	Year	Agency	1980	1985	1990	1980	1985	1990	1980	1985	1990
U.S. Energy through the Year 2000	1972	BOM	.00035	.00061	----	4.0	4.3	----	12.3	7.6	----
U.S. Energy Outlook	1972	NPC (Case I)	.00064	.00154	----	4.0	4.7	----	12.3	7.6	----
		Case II	.00064	.00128	----	3.6	4.0	----	15.9	18.4	----
		Case III	.00051	.00102	----	3.6	3.8	----	22.4	20.6	----
		Case IV	.00037	.00092	----	3.3	3.6	----	34.7	40.6	----
A Time to Choose	1974	Ford Foundation	----	.00041	(.00057)	----	4.0	(15.0)	----	12.7	(12.7)
Project Independence	1974	FEA (BAY and AD) ($11 oil)	----	.00065-.00076	----	----	4.N	----	6.1-9.7	0-11.6	NA
Energy Self-Sufficiency: An Economic Evaluation[1]	1974	MIT: (1) Econometric Model ($11 oil)	.00049	----	----	3.5	----	----	0	----	----
		(2) Judgmental Model ($11 oil)	.00049	----	----	3.5	----	----	0	----	----
CIAB/Commerce	1975	Commerce Department	----	.00094	----	----	6.3	----	----	14.0	----
U.S. Energy through the Year 2000	1975	Bureau of Mines ($8 oil)	.00023	.00061	NA	3.8	3.9	NA	17.8	17.1	NA
			.00019	.00041	.00066	3.7	3.9	4.2	16.1	20.6	41.8
National Energy Outlook	1976	FEA (ref. case $8 oil)	.00020	.00045	.00069	3.9	3.9	4.7	9.3	12.5	20.5
Towards Project Interdependence	1975	CRS	.00030	.00064	NA	4.2	5.9	NA	21.1-22.4	19.1-22.0	NA
An Assessment of U.S. Foreign Policy	1976	Walter Levy	.00020	.00045	NA	3.5	3.8	NA	19.5	22.7	NA
World Energy Outlook	1977	OECD	.00023	.00052	NA	3.7	4.0	----	----	26.3-30.9	NA
U.S. Energy Outlook	1977	CIA	.00017-.00020	.00077-.00042	NA	3.6	4.2	NA	22.2	25.4-31.8	NA
	1976	Shell	.00022	.00064	.00121	3.0	3.0	3.2	21.2	22.7	21.6
	1978	do	.00022	.00040	.00058	3.0	3.0	3.2	21.2	23.9	23.9
	1978	Exxon	.00025	.00048	.00072	----	----	----	----	----	----
Energy Supply and Demand	1978	EIA/DOE (med.)	----	.00032	.00054	----	4.2	5.0	----	23.3	29.2
Do	1978	Frankel	.00022	.00039	.00071	3.4	4.0	4.0	21.8	21.4	20.3
Do	1978	SRI	.00020	.00038	.00053	3.7	4.0	4.2	14.6	14.2	13.8
Project Interdependence	1978	CRS	.00028	.00045	.00060	3.2	4.0	5.0	21.2	25.0	27.3
Outlook for Oil in the 21st Century	1978	Lichtblau	.00020	.00040	.00063	3.1	3.3	3.4	20.5-21.8	19.9-22.0	21.7-24.8

[1]Energy demand econometric model: 46,000,000 (barrels per day) oil equivalent in 1980. Energy demand judgment model: 39,400,000 (barrels per day) oil equivalent in 1980. No data available for 1985 and 1990.
[2]Data in parentheses are for the year 2000.
[3]Conversion factors: 5,800,000 Btu's per barrel of oil, 1,031 Btu's per cubic foot of natural gas; 23,580,000 Btu's per short ton of coal; 3412 Btu's per kWh equivalent of nuclear generation.

Source: The Energy Factbook, prepared by the Congressional Research Service of the Library of Congress, November 1980, p. 66.

OHIO DEPARTMENT OF ENERGY
RESPONSE TO A-95 REVIEW COMMENTS

Pursuant to the requirements of the Ohio Revised Code, the draft of the 1981 Ohio Energy Status Report was submitted to 26 reviewing agencies through the State Clearinghouse.

As of the required date of filing this Report with the Governor and the Ohio General Assembly, comments have been received from three reviewing agencies, copies of which are made part of this final report.

The comments received from reporting agencies noted no exception to the report and our suggested course of future action. In fact, each of the reports received suggested we proceed with application for funding the actions suggested herein.

As subsequent reports from reviewing agencies are received, they will be made a part of the permanent record and will be available at the offices of the Ohio Department of Energy, 30 E. Broad St., 34th Floor, Columbus, Ohio 43215.

ROBERT W. SWIETYNIOWSKI
President

FREDERICK E. J. PIZZEDAZ
Executive Director

NORTHEAST OHIO AREAWIDE COORDINATING AGENCY
SERVING THE COUNTIES OF AND MUNICIPALITIES WITHIN CUYAHOGA, GEAUGA, LAKE, LORAIN, AND MEDINA

August 25, 1981

Mr. Robert C. Masoner
State of Ohio
Ohio Department of Energy
30 E. Broad Street - 34th Fl.
Columbus, Ohio 43215

RE: SAI No. 32-001-0017 Ohio Energy Annual Status Report

Dear Mr. Masoner:

Because your project is noted as having statewide impact, please be advised that NOACA is conducting a formal A-95 Review of it. Upon completion of that review, which will take place at the NOACA Board meeting on Oct. 7, 1981, we will transmit to you and the State Clearinghouse copies of our A-95 recommendation and all comments received through the Solicitation Process. To assist us in this Project Notification and Review System (PNRS), we do request that you complete and return the enclosed NOACA Notice of Intent form immediately.

Should you have any questions regarding NOACA's review of your application, contact Karen Lind, A-95 Coordinator, at 216/241-2414, Ext. 611.

Yours very truly,

Frederick E. J. Pizzedaz
Executive Director

FEJP:KL:sj

enclosure

cc: Judith Y. Brachman, Administering Officer
State of Ohio Clearinghouse

1501 EUCLID AVENUE • CLEVELAND, OHIO 44115 • [216] 241-2414

SEP 91981

mid-ohio
regional
planning
commission

514 SOUTH HIGH STREET • COLUMBUS, OHIO 43215 • PHONE (614) 228-2663

Chairman: Don Hummer
Director: William C. Habig

September 4, 1981

Mr. Robert C. Masoner
State of Ohio
Ohio Department of Energy
30 E. Broad Street 34th Floor
Columbus, Ohio 43215

RE: Ohio Energy Annual Status Report

FILE#: 2116-HR-81 32-001-0017

STAFF REVIEWER: Craig A. Braunschweiger

Dear Mr. Masoner:

The Mid-Ohio Regional Planning Commission, as a metropolitan clearinghouse for Franklin County and the adjacent townships plus Berkshire Township and in accordance with regulations and procedures established under Circular A-95, Office of Management and Budget, has reviewed the project captioned above.

Our review has concentrated on issues of coordination and correspondence of the project with existing plans. We have found it to be in compliance with our criteria and recommend that you proceed with your application to the appropriate Federal agency.

Sincerely,

Crystal Hawkins

Crystal Hawkins
A-95 Review Officer

STATE CLEARINGHOUSE TRANSMITTAL

State Office Tower, 30 E. Broad St., Rm. 3916
Columbus, Ohio 43215, Ph. 614-466-7461

Date Review Started	Return no later than	Federal Catalog No	S.A.I. Number	Date Review Ended
81-08-14	Sept 8, 1981	81.999***	32-001-0017	

☐ Pre-application/Notice of Intent ☑ Final Application ☐ Additional Information ☐ Revision ☐ Full application available at State Clearinghouse, please request within 5 days.

Review Agencies

TO:	RETURNED:	TO:	RETURNED:
☐ Administrative Services, Dept. of	☐	☐ Mental Health & Mental Retardation, Dept. of	☐
☐ Aging, Commission on	☐	☐ MH&MR Developmental Disabilities	☐
☐ Agriculture, Dept. of	☐	☑ Natural Resources, Dept. of	☐
☐ Civil Rights Commission	☐	☐ Public Welfare, Dept. of	☐
☐ Economic & Community Development, Dept. of	☐	☑ Transportation, Dept. of	☐
☐ Employment Services, Bureau of	☐	☐ Youth Commission, Ohio	☐
☐ Energy, Dept. of	☐	☑ LBO	☐
☑ Environmental Protection Agency	☐	☑ PCS-McElroy	☐
☐ Health, Dept. of	☐	☑ OBM- Jennison	☐
☑ Historic Preservation Office	☐	☐	☐

RECEIVED
AUG 24 1981
MORPC

SPECIAL INSTRUCTIONS

NOACA	EDATA	RICHLAND	OMEGA
OKI	MVRPC	BHJ	OVRDC
MORPC	CC-SRPC	KYOVA	MWOJPC-OPTIONAL
NEFCO	MAUMEE	BOM	NSCOG-OPTIONAL
TMACOG	LA-RPC	BHHVRDD	

Reviewing agency must complete section A. Reviewer may also complete Sections B and C.

COMMENTS - attach another sheet. Comments cited in Section A must include (1) Identification of reviewing agency's statute or specific plan or program related to this proposal; (2) Description of impact of this proposal on identified plan or program; (3) Reviewer's recommended changes for or additions to the proposal. Please type all comments and include SAI number on your comment sheet.

A. REVIEWING AGENCY POSITION ON PROJECT (Mark one only)

- ☒ No comment.
- ☐ Clearance of the project should be granted.
- ☐ Clearance of the project should not be delayed, but applicant should answer the reviewer's questions or concerns. See enclosed comments.
- ☐ Clearance of the project should only be granted on the condition that the applicant use the recommendations in the enclosed comments.
- ☐ Clearance of the project should be delayed until the applicant has satisfactorily addressed the concerns stated in the enclosed comments.

B. INFORMATION FOR APPLICANT

- ☐ Remarks enclosed for your use.
- ☐ Suggestions for improvement of the project are enclosed.
- ☐ Applicant should coordinate with reviewing agency. See enclosed comments, and contact reviewer listed.

C. ADDITIONAL INFORMATION REQUESTED

- ☐ Request opportunity to review the final application before the applicant submits it to the federal funding agency.
- ☐ Request that applicant send previous year's program evaluation to reviewer listed.
- ☐ Request the following information from the applicant:

Craig A. Braunschweiger
Reviewer's Signature

Crystal Hawkins

PLEASE TYPE THE FOLLOWING INFORMATION:

Reviewer

Name Craig A. Braunschweiger

Phone 228-2663

Agency

Name Mid-Ohio Regional Planning Commission

Street address 514 South High St

City Columbus, Ohio 43215 Zip Code

51

WILLIAM P. FERGUS, P.E.
DIRECTOR

September 17, 1981

Ohio Department of Energy
30 East Broad Street, 34th Floor
Columbus, Ohio 43215

ATT: CHARLES MORRIS

A-95 AREAWIDE CLEARINGHOUSE REVIEW

RE: Ohio Energy Annual Status Report

Dear Mr. Morris:

The A-95 review of the above referenced proposal was completed on September 17, 1981.

We recommend that you proceed with your request. Should you have any questions regarding EDATA's review of your proposal contact Tim Yova, A-95 Coordinator, at 216/793-3282 or 216/373-1921.

Thank you for your cooperation.

Sincerely,

EASTGATE DEVELOPMENT AND
TRANSPORTATION AGENCY

William P. Fergus

William P. Fergus, P.E.
Director

WPF/bfo

CC: State Clearinghouse

EASTGATE DEVELOPMENT AND TRANSPORTATION AGENCY
130 JAVIT COURT, YOUNGSTOWN, OHIO 44515
216 / 793-3282 YOUNGSTOWN
373-1921 WARREN

EDATA'S A-95 STAFF REVIEW

Date Reviewed: AUG 28 1981

A-95 Log # 81-269

GPB Resolution N/A

Applicant: Ohio Dept. of Energy

Project: Annual Status Report

1. Does this project satisfy the long and short term objectives of EDATA's:

	Comprehensive Plan
OF	Transportation Plan
	208 Wastewater Plan
	Environmental
	Energy Plan
	Minorities and Disadvantaged Employment

ADDITIONAL COMMENTS: _____

EDATA'S TECHNICAL ADVISORY COMMITTEE

Date Reviewed: SEP 3 1981

1. Does this project satisfy local:

	Subdivision Regulations
	Land Use Plans
	Zoning Regulations
	Flood Plain Regulations
	Environmental Impact
	Historical Sites
	Economic Impact
	Equal Opportunity Compliance

ADDITIONAL COMMENTS: _____

EDATA'S CITIZENS' ADVISORY BOARD COMMITTEE

Date Reviewed: _____

1. Equal Opportunity Compliance NO MEETING

2. Environmental Impact _____

ADDITIONAL COMMENTS: _____

REVIEWED BY Tracy Joyce

S.A.I. NUMBER 32-001-0617

Support-6
N.C.-6

APPLICANT Ohio Dept. of Energy

EDATA A-95 Log # 81-269
GPB Resolution # NA

____ I support this proposal
____ I oppose this proposal
_L_ I do not wish to comment on this proposal
____ Please provide more information

ADDITIONAL COMMENTS _____

NAME George Sumner SIGNATURE _____

REPRESENTING EAH City Adv Comm DATE 8-27-81

APPLICANT Ohio Dept. of Energy

EDATA A-95 Log # 81-269
GPB Resolution # NA

_X_ I support this proposal
____ I oppose this proposal
____ I do not wish to comment on this proposal
____ Please provide more information

ADDITIONAL COMMENTS _____

NAME ~~DAVID M. HARTSOCK~~ SIGNATURE Chief David M Hartsock

REPRESENTING Howland Township Police Dept. DATE 8/27/81

APPLICANT Ohio Dept. of Energy

EDATA A-95 Log # 81-269
GPB Resolution # NA

____ I support this proposal
____ I oppose this proposal
_X_ I do not wish to comment on this proposal
____ Please provide more information

ADDITIONAL COMMENTS _____

NAME Alfred M. Lee SIGNATURE Alfred M. Lee

REPRESENTING Ohio Preservation Office DATE 8-29-81
Region 2A, Cleveland Museum of Natural History

APPLICANT Ohio Dept. of Energy

EDATA A-95 Log # 81-269
GPB Resolution # NA

✓ I support this proposal
I oppose this proposal
I do not wish to comment on this proposal
Please provide more information

ADDITIONAL COMMENTS

NAME _____ SIGNATURE Dan D

REPRESENTING Niles DATE 8/24/81

APPLICANT Ohio Dept. of Energy

EDATA A-95 Log # 81-269
GPB Resolution # NA

✓ I support this proposal
I oppose this proposal
I do not wish to comment on this proposal
Please provide more information

ADDITIONAL COMMENTS

NAME Amy IANAZONE SIGNATURE Amy Ianazone

REPRESENTING YMCA DATE 8-24-81

APPLICANT Ohio Dept. of Energy

EDATA A-95 Log # 81-269
GPB Resolution # NA

I support this proposal
I oppose this proposal
✓ I do not wish to comment on this proposal
Please provide more information

ADDITIONAL COMMENTS

NAME _____ SIGNATURE _____

REPRESENTING _____ DATE _____

APPLICANT Ohio Dept. of Energy

EDATA A-95 Log # 81-269
GPB Resolution # NA

✓ I support this proposal
I oppose this proposal
I do not wish to comment on this proposal
Please provide more information

ADDITIONAL COMMENTS

NAME Dale ORLOFSKY SIGNATURE Dale Orlofsky

REPRESENTING OHPO - Dept. of EA DATE 8/27/81

APPLICANT Ohio Dept. of Energy

FDATA A-95 Log # 81-269
GPB Resolution # NA

____ I support this proposal
____ I oppose this proposal
X I do not wish to comment on this proposal
____ Please provide more information

ADDITIONAL COMMENTS _____

NAME _____ SIGNATURE D Smith

REPRESENTING _____ DATE 8-25-81

APPLICANT Ohio Dept. of Energy

FDATA A-95 Log # 81-269
GPB Resolution # NA

____ I support this proposal
____ I oppose this proposal
____ I do not wish to comment on this proposal
____ Please provide more information

ADDITIONAL COMMENTS _____

NAME _____ SIGNATURE _____

REPRESENTING _____ DATE _____

APPLICANT Ohio Dept. of Energy

FDATA A-95 Log # 81-269
GPB Resolution # NA

____ I support this proposal
____ I oppose this proposal
✓ I do not wish to comment on this proposal
____ Please provide more information

ADDITIONAL COMMENTS _____

NAME _____ SIGNATURE Kenneth Moore

REPRESENTING _____ DATE 8-24-81

APPLICANT Ohio Dept. of Energy

EDATA A-95 Log # 81-269
GPB Resolution # NA

____ I support this proposal
____ I oppose this proposal
____ I do not wish to comment on this proposal
__✓__ Please provide more information

ADDITIONAL COMMENTS _____

NAME Ronald Shook SIGNATURE Ronald Shook

REPRESENTING ALCAA DATE 8/24/81

APPLICANT Ohio Dept. of Energy

EDATA A-95 Log # 81-269
GPB Resolution # NA

__X__ I support this proposal
____ I oppose this proposal
____ I do not wish to comment on this proposal
____ Please provide more information

ADDITIONAL COMMENTS _____

NAME _____ SIGNATURE Michael C. Gaulin

REPRESENTING AMHA DATE 8-25-81

EDATA A-95 Log # 81-269
GPB Resolution # NA

__✓__ I support this proposal
____ I oppose this proposal
____ I do not wish to comment on this proposal
____ Please provide more information

ADDITIONAL COMMENTS _____

NAME PATRICK B. ROSS SIGNATURE Patrick B. Ross

267 OAK STREET
REPRESENTING LEETONIA, OHIO 44431 DATE AUG 2 3 1981
PHONE 216-427-2091